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# Agricultural Conservation Program for Wyoming

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Kearney Lake Irrigation Reservoir nearing completion  
in Big Horn Mountains.

UNITED STATES DEPARTMENT of AGRICULTURE

S. Agricultural Stabilization and Conservation Service, X

10  
ACP-1963

WYOMING



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FOREWORD

Productive soil, adequate water, and well-managed woodland are the very foundation of American agriculture. The Agricultural Conservation Program is the means through which all our people, including farmers, share the costs of conserving these essential national resources. This program increases the rate of application of the research, education, technical, credit, and other services of the Department of Agriculture in actual accomplishment of essential conservation work on the land.

Let all farmers, and particularly those not now carrying out sound conservation practices, use the 1963 Agricultural Conservation Program to increase conservation accomplishments on their lands.

\*\*\*\*\*

Wyoming ASC State Committee

Raymond Johnson, Chairman  
Lingle, Wyoming

Donald C. Gose, Member      Sherman T. Gustin, Member  
Upton, Wyoming              Fort Washakie, Wyoming

Dr. George H. Starr, Director  
Agricultural Extension Service  
Laramie, Wyoming

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John O. Asay, State Executive Director

Mrs. Virginia M. McFall  
Chief Clerk - ACP

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State ACP Program Specialist

THE 1963 AGRICULTURAL CONSERVATION PROGRAM  
FOR WYOMING

Through the 1963 Agricultural Conservation Program, the Federal Government will share with Wyoming farmers and ranchers the cost of carrying out approved soil-building and soil and water conservation practices, including related wildlife conservation practices, in accordance with the provisions of this handbook and such modifications thereof as may hereafter be made.

Information with respect to the several practices for which costs will be shared when carried out on a particular farm or ranch, and the exact specifications and rates of cost-sharing for such practices, may be obtained from the county committee for the county in which the farm or ranch is located or from the State Committee.



## Section 1--GENERAL PROGRAM PRINCIPLES

The 1963 National Agricultural Conservation Program has been developed and is to be carried out on the basis of the following general principles:

1. The national program contains broad authorities to help meet the varied conservation problems of the Nation. State and county committees and participating agencies shall design a program for each State and county. Such programs should include any additional limitations and restrictions necessary for the maximum conservation accomplishment in the area. The programs should be confined to the conservation practices on which Federal cost-sharing is most needed in order to achieve the maximum conservation benefit in the State or county.

2. The State and county programs should be designed to encourage those conservation practices which provide the most enduring conservation benefits practicably attainable in 1963 on the lands where they are to be applied.

3. Costs will be shared with a farmer or rancher only on satisfactorily performed conservation practices for which Federal cost-sharing was requested by the farmer or rancher before the conservation work was begun.

4. Costs should be shared only on conservation practices which it is believed farmers or ranchers would not carry out to the needed extent without program assistance. In no event should costs be shared on practices except those which are over and above those farmers or ranchers would be compelled to perform in order to secure a crop.

5. The rates of cost-sharing in a county or State are to be the minimum required to result in substantially increased performance of needed conservation practices within the limits prescribed in the national program.

6. The purpose of the program is to help achieve additional conservation on land now in agricultural production rather than to bring more land into agricultural production. The program is not applicable to the development of new or additional farmland by measures such as drainage, irrigation, and land clearing.

7. If the Federal Government shares the cost of conservation practices, the farmers and ranchers should assume responsibility for the upkeep and maintenance of those practices throughout their lifespans.

## Section 2-- DISTRIBUTION OF FUNDS

The State Committee will allocate the funds available for conservation practices among the counties within the State consistent with the

needs for enduring conservation in the counties within the State and will give particular consideration to the furtherance of watershed conservation programs sponsored by local people and organizations.

### Section 3--STATE AND COUNTY AGRICULTURAL CONSERVATION PROGRAMS

A. Agencies participating in development of State program.--The State Agricultural Conservation Program was developed by the State ACP Development Group consisting of the State Committee (including the State Director of Extension), the State Conservationist of the Soil Conservation Service, and the Forest Service official having jurisdiction of farm forestry in the State. The President of the Land-Grant College and the State Director of the Farmers Home Administration designated representatives to counsel with the group in the formulation of the State program. Representatives of the State Soil Conservation Committee, the State Agricultural Extension Service, other State and Federal agricultural agencies, and others with conservation interests participated in the deliberations on the State program.

The program for the State is that recommended by the State ACP Development Group and approved by the Deputy Administrator, Conservation, ASCS.

B. Agencies to participate in development of county programs.--A County Agricultural Conservation Program shall be developed in each county in accordance with the provisions of the State program and such modifications thereof as may be made. The county program shall be developed by the County ACP Development Group consisting of the county committee, the designated representative of the Soil Conservation Service in the county, and the Federal Forest Service representative having jurisdiction of farm forestry in the county. The County ACP Development Group, working with the community committeemen, the governing body of the Soil and Water Conservation District, the farm forestry representatives of the State, the County Agricultural Extension Agent for the county, the County Supervisor of the Farmers Home Administration, and others with conservation interests, shall develop recommendations for the county program.

The program for the county then shall be formulated by the County ACP Development Group in consultation with the governing body of the Soil and Water Conservation District on the overall conservation problems in the county and, especially, on the work plans of the Soil and Water Conservation District and of the Federal agencies involved to assure the most effective use of the available technical assistance and funds for cost-sharing. The program as formulated shall be recommended to the State Committee for approval by the State ACP Development Group. The program for the county shall be that recommended by the County ACP Development Group and approved by the State ACP Development Group. The program recommendation shall be signed by the chairman of the county committee, the Soil Conservation Service technician, and the Forest Service representative where present in the county, and shall state that the program was



developed in consultation with the governing body of the Soil and Water Conservation District, if any, or shall state that the governing body was invited to participate in developing the program but did not accept.

C. Selection of practices.--Practices to be included in the county program shall be only those practices for which cost-sharing is essential to permit accomplishment of needed conservation work which would not otherwise be carried out.

D. Adaptation of practices.--The practices included in the county program must meet all conditions and requirements of the State program. Additional conditions and requirements may be included where necessary for effective use in meeting the conservation problems in the county.

E. Practice specifications.--Minimum specifications which practices must meet to be eligible for Federal cost-sharing are set forth in this State handbook or in the county program, or are incorporated therein by specific reference to a standard publication or other written document containing such specifications.

The specifications for practices as set forth in section 10 of this handbook provide the minimum requirements to be met in order to qualify for cost-sharing. The county committee is authorized to add to the specifications to provide additional requirements, to tighten existing requirements, or to establish closing dates for the performance of individual practices provided such closing dates are not later than December 31, 1963. For any practice for which the Soil Conservation Service has been assigned technical responsibility, detailed specifications or designs in addition to the minimum requirements contained in section 10 may be recommended by the technician to the county committee, furnished to the producer, and made a necessary requirement in the performance of that practice.

There follows a list of perennial grasses and biennial and perennial legumes which will be eligible for cost-sharing, when approved by the county committee, under practices A-2, B-1, B-2, and C-1. Perennial grasses or biennial or perennial legumes not listed below may be approved for cost-sharing in cases where the county committee determines the grass and/or legume to be adapted to the conditions of the county and to the purpose which the vegetative cover is to serve. To be eligible for cost-sharing, all seed sown must be free from primary noxious weeds and within allowable tolerances for secondary noxious weeds as set forth in Section 34-703 of the Wyoming Pure Seed Laws. Farmers or ranchers planning to establish vegetative cover under any of the foregoing practices will find valuable information relative to seedbed preparation, time, method, and manner of seeding, seeding rates, adapted varieties for both straight seedings and mixtures recommended for irrigated lands in Circular No. 50, "Seeding Mixtures for Irrigated Pastures." Similar information can be obtained for dryland seedings for Bulletin 314, "Grass Establishment on Wyoming Drylands." Either of these bulletins may be obtained from the

local office of the county Agricultural Extension Service. It is recommended that only domestic legume seeds be used. Only the varieties of grasses and legumes adapted to local conditions should be approved. All legume seed should be inoculated with the proper strain of bacteria.

Grasses: Bluegrass, brome grass, crested wheatgrass, grama grass, green needle grass, intermediate wheatgrass, orchardgrass, reed canarygrass, Russian wildrye, slender wheatgrass, stiffhair wheatgrass, tall fescue, tall oatgrass, tall wheatgrass, timothy, western wheatgrass, meadow foxtail, Whitmar wheatgrass, and bluebunch wheatgrass.

Legumes: Alfalfa, alsike clover, broadleaf birdsfoot trefoil (Empire and Viking), Ladino clover, red clover, strawberry clover, sweetclover, and white Dutch clover.

F. Use of commercial fertilizers.--For practices which authorize Federal cost-sharing for applications of commercial fertilizers, the minimum application, and maximum application where applicable, on which cost-sharing is authorized shall, in each case, be determined on the basis of a current soil test, where possible, or on the basis of indicative soil tests for the area. The application of manure will not qualify for Federal cost-sharing; however, manure may be used, where applicable, to meet all or a part of the fertilizer requirement for a practice.

G. Responsibility for technical phases of practices.--The Soil Conservation Service is responsible for the technical phases of practices A-8, B-6, B-7, B-8, C-4, C-5, C-6, C-7, C-8, C-9, C-10, C-12, C-13, C-14, C-15, and C-16. This responsibility shall include (1) a finding that the practice is needed and practicable on the farm, and with respect to drainage practices, a finding as to whether any land proposed for drainage is Wetland Type 3, 4, or 5, as described in U. S. Department of the Interior, Fish and Wildlife Service Circular 39, "Wetlands of the United States," published in 1956, (2) necessary site selection, other preliminary work, and layout work of the practice, (3) necessary supervision of the installation, and (4) certification of performance for all requirements of the practice except those for which a certification by the farmer or rancher is to be accepted in accordance with instructions issued by the ASC State Committee. For practice C-1, the Soil Conservation Service is responsible (1) for determining that the practice is needed and practicable on the farm, and (2) for necessary site selection, other preliminary work, and layout work of the practice. The State Conservationist of the Soil Conservation Service may utilize assistance from private, State, or Federal agencies in carrying out these assigned responsibilities. The Soil Conservation Service will utilize to the full extent available resources of the State forestry agencies in carrying out its assigned responsibilities for practice A-8.

The Forest Service is responsible for the technical phases of practices A-7 and B-10. This responsibility shall include (1) providing necessary specialized technical assistance, (2) development of



specifications for forestry practices, (3) assisting farmers with the planting plan and layout of the practice, and (4) determining and reporting performance. The Forest Service may utilize assistance from private, State, or Federal agencies in carrying out these assigned responsibilities, but services of State forestry agencies will be utilized to the full extent such services are available.

H. Rates of cost-sharing.--The maximum Federal cost-share for each practice shall be the percentage of the average cost of performing the practice considered necessary to obtain the needed performance of the practice, but which will be such that the farmer or rancher will make a substantial contribution to the cost of performing the practice. Rates of cost-sharing shall not be in excess of 50 percent of the average cost of performing the practices, except that:

- (1) For practices which have long lasting conservation benefits and from which the returns to the farmer or rancher are remote, rates of cost-sharing in excess of 50 percent of the average cost of performing the practices may be established by the State ACP Development Group for practices for which such authority is specifically delegated to it by the Secretary in section 3-H of the National Bulletin, and for other such practices with the approval of the Deputy Administrator, Conservation, ASCS.
- (2) Upon justification by the State and County ACP Development Groups, the Deputy Administrator, Conservation, ASCS, may approve a rate of cost-sharing for one or more additional practices in a county in excess of 50 percent of the average cost of performing the practice, but only if the increased rate of cost-sharing is essential to introduce a greatly needed new conservation practice into the county or to bring about a greatly needed increase in the extent to which the practice otherwise would be carried out.

For the purpose of establishing rates of cost-sharing, the average cost of performing a practice may be the average cost for the State, a county, a part of a county, or a farm or ranch.

The rates of cost-sharing for practices included in the county program may be lower than the rates approved for general use in the State.

I. Items of cost on which rates of cost-sharing may be based.--Except as otherwise provided by the wording of the practices contained in section 10 or elsewhere in the 1963 program, the cost of any direct and significant factor in the performance of a practice may be considered in establishing the rate of cost-sharing for the practice.

J. County committee responsibility to determine costs.--For practices where the cost-share rate is based on a percentage of the cost of



some or all of the materials and/or services utilized in performing such practices, the county committee is responsible for determining the eligible cost of such materials and/or services to be used as a basis for computing cost-sharing for performance of the practice.

#### Section 4-APPROVAL OF CONSERVATION PRACTICES ON INDIVIDUAL FARMS OR RANCHES

A. Opportunity for requesting cost-sharing.--Each farmer or rancher shall be given an opportunity to request that the Federal Government share in the cost of those practices on which he considers he needs such assistance in order to permit their performance on his farm or ranch. The county committee, taking into consideration the farmer's or rancher's request and any conservation plan developed by the farmer or rancher with the assistance of any State or Federal agency, shall direct the available funds for cost-sharing to those farms and ranches and to those practices where cost-sharing is considered most essential to the accomplishment of the basic conservation objective of the Department--the use of each acre of agricultural land within its capabilities and the treatment of each acre in accordance with its needs for protection and improvement.

B. Prior request for cost-sharing.--Costs will be shared only for those practices, or components of practices, for which cost-sharing is requested by the farmer or rancher before performance thereof is started, except that for practices E-3, F-3, and F-4, the Deputy Administrator, Conservation, ASCS, may authorize the acceptance of requests for cost-sharing filed within a reasonable period after performance thereof is started. For practices for which (1) approval was given under the 1962 Agricultural Conservation Program, (2) performance was started but not completed during the 1962 program year, and (3) the county committee believes the extension of the approval to the 1963 program is justified under the 1963 program regulations and provisions, the filing of the request for cost-sharing under the 1962 program may be regarded as meeting the requirement of the 1963 program that a request for cost-sharing be filed before performance of the practice is started.

C. Method and extent of approval.--The county committee, in accordance with a method approved by the State Committee, will determine the extent to which Federal funds will be made available to share the cost of each approved practice on each farm or ranch, taking into consideration the county allocation, the conservation problems in the county and of the individual farm or ranch, and the conservation work for which requested Federal cost-sharing is considered by the county committee as most needed in 1963. The method approved shall provide for the issuance of notices of approval showing for each approved practice the number of units of the practice for which the Federal Government will share in the cost and the amount of the Federal cost-share for the performance of that number of units of the practice. To the extent practicable, notices of approved practices shall be issued before performance of the practices is started. Available funds for cost-sharing shall not be allocated on a farm or acreage-quota basis, but shall be directed to the accomplishment of the most enduring conservation benefits attainable.

D. Establishment or installation of practices.--Federal cost-sharing may be authorized for the first establishment or installation of a practice with cost-sharing since the 1953 program on a particular piece of land while under the control of the current operator. Federal cost-sharing may also be authorized for replacement, enlargement, or restoration of practices for which cost-sharing has been allowed under the 1954 or a subsequent program if the practice has served for its normal life-span, or if all of the following conditions exist:

- (1) Replacement, enlargement, or restoration of the practice is needed to meet the conservation problem.
- (2) The failure of the original practice was not due to the lack of proper maintenance by the current operator.
- (3) The county committee believes that the replacement, enlargement, or restoration of the practice merits consideration under the program to an equal extent with other practices for which cost-sharing has not been allowed under a previous program.

E. Repair, upkeep, and maintenance of practices.--Federal cost-sharing is not authorized for repairs or for normal upkeep or maintenance of any practice.

F. Pooling agreements.--Farmers or ranchers in any local area may agree in writing, with the approval of the county committee, to perform designated amounts of practices which, by conserving or improving the agricultural resources of the community, will solve a mutual conservation problem on the farms or ranches of the participants. For purposes of eligibility for cost-sharing, practices carried out under such an approved written agreement will be regarded as having been carried out on the farms or ranches of the persons who performed the practices.

#### Section 5--PRACTICE COMPLETION REQUIREMENTS

A. Completion of practices.--Federal cost-sharing for the practices contained in section 10 is conditioned upon the performance of the practices in accordance with all applicable specifications and program provisions. Except as provided in sections 5-B, 5-C and 5-D, practices must be completed during the program year in order to be eligible for cost-sharing.

B. Practices substantially completed during the program year.--Approved practices may be deemed, for purposes of payment of cost-shares, to have been carried out during the 1963 program year, if the county committee determines that they are substantially completed by the end of the program year. However, no cost-shares for such practices shall be paid until they have been completed in accordance with all applicable specifications and program provisions, except as provided in section 5-C.



C. Practices requiring more than one program year for completion. Cost-shares approved under the 1963 program will not be considered as earned until all components of the approved practices are completed in accordance with all applicable specifications and program provisions. Cost-shares for completed components may be paid only after the practice is substantially completed, and the farmer or rancher agrees in writing to complete the remaining components of the practice within the time prescribed by the county committee which will afford the farmer or rancher a fair and reasonable opportunity to complete them, unless prevented from doing so for reasons beyond his control and regardless of whether cost-sharing therefor is offered, or refund the cost-shares paid to him. Substantial completion shall be determined in accordance with instructions issued by the State Committee.

D. Practices involving the establishment or improvement of vegetative cover.--Costs for practices involving the establishment or improvement of vegetative cover, including trees, may be shared even though a good stand is not established, if the county committee determines, in accordance with standards approved by the State Committee, that the practice was carried out in a manner which would normally result in the establishment of a good stand, and that failure to establish a good stand was due to weather or other conditions beyond the control of the farm or ranch operator. The county committee may require as a condition of cost-sharing in such cases that the area be reseeded or replanted, or that other needed protective measures be carried out. Cost-sharing in such cases may be approved also for repeat applications of measures previously carried out or for additional eligible measures. Cost-sharing for such measures shall be approved to the extent such measures are needed to assure a good stand even though less than that required by the applicable practice wording for initial approvals.

E. Failure to meet minimum requirements.--Notwithstanding other provisions of the 1963 program, costs may be shared for performance actually rendered even though the minimum requirements for a practice are not met, if the farmer or rancher establishes to the satisfaction of the county committee and the county representative of any other agency having responsibility for technical phases of the practice (1) that he made a reasonable effort to meet minimum requirements, and (2) that the practice as performed adequately meets the conservation problem.

#### Section 6--FEDERAL COST-SHARES

A. Conservation materials and services.--(1) Availability.--Part or all of the Federal cost-share for an approved practice may be in the form of conservation materials or services furnished through the program for use in carrying out the practice. Materials or services may not be furnished to persons who are indebted to the Federal Government, as indicated by the debt record maintained in the office of the county committee, except in those cases where the agency to which the debt is owed waives its rights to setoff in order to permit the furnishing of materials and services.

(2) Cost to farmer or rancher.--The farmer or rancher will be responsible for paying that part of the cost of the material or service which is in excess of the amount to be advanced toward the purchase of the material or service. The maximum amount which may be advanced toward the purchase of the material or service is the Federal cost-share attributable to the use of the material or service, or, upon request by the farmer or rancher and approval by the county committee, the Federal cost-share for all components of the practice which likely will be completed during the program year, but not in excess of the cost of the material or service.

(3) Responsibility for materials and services.--If the material or service is properly used in carrying out the practice with respect to which it was furnished, recovery of the amount advanced toward the purchase of the material or service will be made from the persons who share in the cost-share payment for the practice, in the proportion in which they share in the cost-share payment. If the material or service is not used for the purpose for which it was furnished, the person to whom it was furnished shall be indebted to the Federal Government for the amount advanced toward the cost of the material or service.

Any person to whom materials are furnished shall be responsible to the Federal Government for any damage to the materials, unless he shows that the damage was caused by circumstances beyond his control. If materials are abandoned or not used during the program year, they may, in accordance with instructions issued by the Deputy Administrator, Conservation, ASCS, be transferred to another person or otherwise disposed of at the expense of the person who abandoned or failed to use the material, or be retained by the person for use in a subsequent program year.

B. Practices carried out with aid from ineligible persons.--The entire Federal cost-share for a practice carried out with aid from an ineligible person, including a State or Federal agency, shall be credited to the eligible persons who contributed to the cost of carrying out the practice; provided that the cost-share credited to an eligible person shall not exceed his contribution to the cost of carrying out the practice.

C. Division of Federal cost-shares.--(1) Federal cost-shares.--The Federal cost-share for a practice shall be credited to the person who carried out the practice. If more than one person contributed to the carrying out of a practice, the Federal cost-share for the practice shall be divided among such persons in the proportion that the county committee determines they contributed to the carrying out of the practice. In making this determination, the county committee shall take into consideration the value of the labor, equipment, or material contributed by each person toward the carrying out of the practice, and shall assume that each contributed equally unless it is established to the satisfaction of the county committee that their respective contributions thereto were not in equal proportion. Advances toward the cost of materials or services under section 6-A, the furnishing of land, and the furnishing of the right to use water will not be considered as a contribution to the carrying out of any practice.



(2) Death, incompetency, or disappearance.--In case of death, incompetency, or disappearance of any person, any Federal share of the cost due him shall be paid to his successor, determined in accordance with the provisions of the regulations in ACP-122, as amended.

D. Increase in small Federal cost-shares.--For practices other than practice F-4, the Federal cost-share computed for any person with respect to any farm or ranch shall be increased as follows:

- (1) Any Federal cost-share amounting to \$0.71 or less shall be increased to \$1.
- (2) Any Federal cost-share amounting to more than \$0.71 but less than \$1, shall be increased by 40 percent.
- (3) Any Federal cost-share amounting to \$1 or more shall be increased in accordance with the following schedule:

Amount of cost- share computed :	Increase in cost-share	::	Amount of cost- share computed	:	Increase in cost-share
\$1 to \$ 1.99....	\$ 0.40	::	\$32 to \$ 32.99...	:	\$10.40
2 to 2.99....	.80	::	33 to 33.99...	:	10.60
3 to 3.99....	1.20	::	34 to 34.99...	:	10.80
4 to 4.99....	1.60	::	35 to 35.99...	:	11.00
5 to 5.99....	2.00	::	36 to 36.99...	:	11.20
6 to 6.99....	2.40	::	37 to 37.99...	:	11.40
7 to 7.99....	2.80	::	38 to 38.99...	:	11.60
8 to 8.99....	3.20	::	39 to 39.99...	:	11.80
9 to 9.99....	3.60	::	40 to 40.99...	:	12.00
10 to 10.99....	4.00	::	41 to 41.99...	:	12.10
11 to 11.99....	4.40	::	42 to 42.99...	:	12.20
12 to 12.99....	4.80	::	43 to 43.99...	:	12.30
13 to 13.99....	5.20	::	44 to 44.99...	:	12.40
14 to 14.99....	5.60	::	45 to 45.99...	:	12.50
15 to 15.99....	6.00	::	46 to 46.99...	:	12.60
16 to 16.99....	6.40	::	47 to 47.99...	:	12.70
17 to 17.99....	6.80	::	48 to 48.99...	:	12.80
18 to 18.99....	7.20	::	49 to 49.99...	:	12.90
19 to 19.99....	7.60	::	50 to 50.99...	:	13.00
20 to 20.99....	8.00	::	51 to 51.99...	:	13.10
21 to 21.99....	8.20	::	52 to 52.99...	:	13.20
22 to 22.99....	8.40	::	53 to 53.99...	:	13.30
23 to 23.99....	8.60	::	54 to 54.99...	:	13.40
24 to 24.99....	8.80	::	55 to 55.99...	:	13.50
25 to 25.99....	9.00	::	56 to 56.99...	:	13.60
26 to 26.99....	9.20	::	57 to 57.99...	:	13.70
27 to 27.99....	9.40	::	58 to 58.99...	:	13.80
28 to 28.99....	9.60	::	59 to 59.99...	:	13.90
29 to 29.99....	9.80	::	60 to 185.99...	:	14.00
30 to 30.99....	10.00	::	186 to 199.99...	:	<u>1/</u>
31 to 31.99....	10.20	::	200 and over.....	:	<u>2/</u>

1/ Increase to \$200

2/ No increase



E. Maximum Federal cost-share limitation.--For practices other than practice F-4, the total of all Federal cost-shares under the 1963 program to any person with respect to farms, ranching units, and turpentine places in the United States, Puerto Rico and the Virgin Islands for approved practices which are not carried out under pooling agreements shall not exceed the sum of \$2,500, and for all approved practices, including those carried out under pooling agreements, shall not exceed the sum of \$10,000.

All or any part of any Federal cost-share which otherwise would be due any person under the 1963 program may be withheld, or required to be refunded, if he has adopted, or participated in adopting, any scheme or device, including the dissolution, reorganization, revival, formation, or use of any corporation, partnership, estate, trust, or any other means, designed to evade, or which has the effect of evading, the provisions of this subsection.

F. Persons eligible to file application for payment of Federal cost-shares.--Any person who, as landlord, tenant, or sharecropper on a farm or ranch, bore a part of the cost of an approved conservation practice is eligible to file an application for payment of the Federal cost-share due him.

G. Time and manner of filing application and required information. It shall be the responsibility of persons participating in the program to submit to the county office forms and information needed to establish the extent of the performance of approved conservation practices and compliance with applicable program provisions. Time limits with regard to the submission of such forms and information shall be established where necessary for efficient administration of the program. Such time limits shall afford a full and fair opportunity to those eligible to file the forms or information within the period prescribed. At least 2 weeks' notice to the public shall be given of any general time limit prescribed. Such notice shall be given by mailing notice to the office of each county committee and making copies available to the press. Other means of notification, including radio announcements and individual notices to persons affected, shall be used to the extent practicable. Notice of time limits which are applicable to individual persons, such as time limits for reporting performance of approved practices, shall be issued in writing to the persons affected.

Payment of Federal cost-shares will be made only upon application submitted on the prescribed form to the county office on or before June 30, 1964. Any application for payment may be rejected if any form or information required of the applicant is not submitted to the county office within the applicable time limit. Notwithstanding any other provision of this handbook, cash payments amounting to less than \$1 will not be made.

Exceptions to time limits may be made in cases where failure to submit required forms and information within the applicable time limits is due to reasons beyond the control of the farmer or rancher, but no time limit may be extended beyond December 31, 1964.

H. Appeals.--Any person may, within 15 days after notice thereof is forwarded to or made available to him, request the county committee or State Committee in writing to reconsider its recommendation or determination in any matter affecting the right to or the amount of his Federal cost-shares with respect to the farm or ranch. If the person is dissatisfied with the decision of the county committee, he may, within 15 days after the decision is forwarded to or made available to him, appeal in writing to the State Committee. If he is dissatisfied with the decision of the State Committee, he may, within 15 days after its decision is forwarded to or made available to him, request the Deputy Administrator, Conservation, ASCS, to review the decision of the State Committee. The decision of the Deputy Administrator, Conservation, ASCS, shall be final. All appeals shall be considered as soon as practicable after they are filed, and prompt written notice of the decision shall be given to the appellant. Written notice of any decision rendered under this subsection by the county or State committee shall also be issued to each other landlord, tenant, or sharecropper on the farm or ranch who may be adversely affected by the decision.

Appeals considered under this subsection shall be decided in accordance with the applicable program provisions on the basis of the facts of the individual case; provided that the Deputy Administrator, Conservation, ASCS, may allow cost-shares for performance not meeting all program requirements, where not prohibited by statute, if in his judgment such action is needed to permit a proper disposition of the appeal. Such action may be taken only where the farmer or rancher, in reasonable reliance on any instruction or commitment of any member, employee, or representative of a State or county committee, in good faith performed an eligible conservation practice and such performance reasonably accomplished the conservation purpose of the practice. The amount of the cost-share in such cases shall be computed on the actual performance and shall not exceed the amount to which the farmer or rancher would have been entitled if the performance rendered had met all requirements for the practice.

#### Section 7--GENERAL PROVISIONS RELATING TO FEDERAL COST-SHARING

A. Compliance with regulatory measures.--Persons who carry out conservation practices under the 1963 program shall be responsible for obtaining the authorities, rights, easements, or other approvals necessary to the performance and maintenance of the practices in keeping with applicable laws and regulations. The person with whom the cost of the practice is shared shall be responsible to the Federal Government for any losses it may sustain because he infringes on the rights of others or fails to comply with applicable laws or regulations.



B. Maintenance and use of practices.--The sharing of costs, by the Federal Government, for the performance of approved conservation practices on any farm or ranch under the 1963 program will be subject to the condition that the person with whom the costs are shared will maintain and use such practices for the conservation purposes for which cost-sharing was authorized throughout their normal lifespans as long as the land on which they are carried out is under his control, unless the State or county committee determines that good farming practice does not require such maintenance and use or that the failure to so maintain and use the practices was due to conditions beyond his control.

C. Practices defeating purposes of programs.--If the county committee finds with the concurrence of the State Committee, or if the State Committee finds, that any person has adopted or participated in any practice during the 1963 program year which tends to defeat the purposes of the 1963 or any previous program, including, but not limited to, failure to maintain, in accordance with good farming practices, practices carried out under a previous program, it may withhold, or require to be refunded, all or any part of the Federal cost-share which otherwise would be due him under the 1963 program.

D. Depriving others of Federal cost-share.--If the State Committee finds that any person has employed any scheme or device (including coercion, fraud, or misrepresentation), the effect of which would be or has been to deprive any other person of the Federal cost-share due that person under the program, it may withhold, in whole or in part, from the person participating in or employing such a scheme or device, or require him to refund in whole or in part, the Federal cost-share which otherwise would be due him under the 1963 program.

E. Filing of false claims.--If the State Committee finds that any person has knowingly supplied false information, or has knowingly filed a false claim, including a claim for payment of the Federal cost-share under the program for practices not carried out or for practices carried out in such a manner that they do not meet the required specifications therefor, such person shall not be eligible for any Federal cost-share under the 1963 program and shall refund all amounts that may have been paid to him under the 1963 program. The withholding or refunding of Federal cost-shares will be in addition to and not in substitution of any other penalty or liability which might otherwise be imposed.

F. Misuse of purchase orders.--If the State Committee finds that any person has knowingly used a purchase order issued to him for conservation materials or services for a purpose other than that for which it was issued, and that such misuse of the purchase order tends to defeat the purpose for which it was issued, such person shall not be eligible for any Federal cost-share under the 1963 program and shall refund all amounts that may have been paid to him under the 1963 program. The withholding or refunding of Federal cost-shares will be in addition to and not in substitution of any other penalty or liability which might otherwise be imposed.

G. Federal cost-share not subject to claims.--Any Federal cost-share, or portion thereof, due any person shall be determined and allowed without regard to questions of title under State law; without deduction of claims for advances (except as provided in the following subsection, and except for indebtedness to the United States subject to setoff under orders issued by the Secretary); and without regard to any claim or lien against any crop, or proceeds thereof in favor of the owner or any other creditor.

H. Assignments.--Any person who may be entitled to any Federal cost-share under the 1963 program may assign his right thereto, in whole or in part, as security for cash loaned or advances made for the purpose of financing the making of a crop in 1963, including the carrying out of conservation practices. No assignment will be recognized unless it is made in writing on Form ACP-69 and in accordance with instructions issued by the Deputy Administrator, Conservation, ASCS.

#### Section 8--DEFINITIONS

For the purposes of the 1963 program:

(a) "Secretary" means the Secretary of Agriculture of the United States or any office or employee of the Department to whom authority has been delegated, or to whom authority may hereafter be delegated, to act in his stead.

(b) "Deputy Administrator, Conservation, ASCS," means the Deputy Administrator, Conservation, Agricultural Stabilization and Conservation Service.

(c) "State Committee" means the persons in a State designated by the Secretary as the Agricultural Stabilization and Conservation State Committee under section 8(b) of the Soil Conservation and Domestic Allotment Act, as amended.

(d) "County committee" means the persons elected within a county as the county committee pursuant to regulations governing the selection and functions of Agricultural Stabilization and Conservation county and community committees under section 8(b) of the Soil Conservation and Domestic Allotment Act, as amended.

(e) "Person" means an individual, partnership, association, corporation, estate, or trust, or other business enterprise, or other legal entity (and, wherever applicable, a State, a political subdivision of a State, or any agency thereof) that, as landlord, tenant, or sharecropper, participates in the operation of a farm or ranch.

(f) "Farm" or "ranch" means that area of land considered as a farm under the current definition of farm applicable to marketing quota and acreage allotment programs.



(g) "Cropland" means that land considered as cropland under the current definition of cropland applicable to marketing quota and acreage allotment programs.

(h) "Program year" means the period July 1, 1962, through December 31, 1963, during which conservation practices, or components thereof, must be carried out to be eligible for cost-sharing.

#### Section 9--AUTHORITY, AVAILABILITY OF FUNDS, AND APPLICABILITY

A. Authority.--The program contained in this handbook is based upon, and is subject to, the provisions of the 1963 National Agricultural Conservation Program, approved by the Secretary of Agriculture on October 25, 1962 (27 F.R.10523), pursuant to the authority vested in him under sections 7 to 17 of the Soil Conservation and Domestic Allotment Act, as amended (49 Stat. 1148; 16 U.S.C.590g-590q), and the Department of Agriculture and Related Agencies Appropriation Act, 1963.

B. Availability of funds.--The provisions of the 1963 program are necessarily subject to such legislation as the Congress of the United States may hereafter enact; the paying of the Federal cost-shares provided herein is contingent upon such appropriation as the Congress may hereafter provide for such purpose; and the amounts of such Federal cost-shares will necessarily be within the limits finally determined by such appropriation.

The funds provided for the 1963 program will not be available for paying Federal cost-shares for which applications are filed in the county office after December 31, 1964.

C. Applicability.--The provisions of the 1963 program contained herein are not applicable to (1) any department or bureau of the United States Government or any corporation wholly owned by the United States; (2) noncropland owned by the United States which was acquired or reserved for conservation purposes, or which is to be retained permanently under Government ownership, including, but not limited to, grazing lands administered by the Forest Service of the U. S. Department Agriculture, or by the Bureau of Land Management (including lands administered under the Taylor Grazing Act) or the Fish and Wildlife Service of the U. S. Department of the Interior, except as indicated in item (7) below; and (3) non-private persons for performance on any land owned by the United States or a corporation wholly owned by it.

The program is applicable to (1) privately owned lands; (2) lands owned by a State or political subdivision or agency thereof; (3) lands owned by corporations which are partly owned by the United States, such as production credit associations; (4) lands temporarily owned by the United States or a corporation wholly owned by it, which were not acquired or reserved for conservation purposes, including lands administered by the Farmers Home Administration, the U. S. Department of Defense, or by any other Government agency designated by the Deputy Administrator,



Conservation, ASCS; (5) any cropland farmed by private persons which is owned by the United States or a corporation wholly owned by it; (6) Indian lands, except that where grazing operations are carried out on Indian lands administered by the Department of the Interior, such lands are within the scope of the program only if covered by a written agreement approved by the Department of the Interior giving the operator an interest in the grazing and forage growing on the land and a right to occupy the land in order to carry out the grazing operations; and (7) noncropland owned by the United States for performance by private persons of conservation practices which directly conserve or benefit nearby or adjoining privately owned lands of such persons who maintain and use such federally owned noncropland under agreement with the Federal agency having jurisdiction thereof.

#### Section 10--CONSERVATION PRACTICES

This section contains the conservation practices of the 1963 State Agricultural Conservation Program and the maximum rates of cost-sharing for each practice. Practices for which the Soil Conservation Service is responsible for all or part of the technical phases are marked with an asterisk(\*). The specifications and rates of cost-sharing in this handbook are applicable to practices carried out on or after January 1, 1963. The specifications and rates of cost-sharing in the 1962 ACP Handbook and Appendix A for Wyoming, as amended, are applicable to practices carried out under the 1963 program prior to January 1, 1963.

#### CONSERVATION PRACTICES WITH ENDURING BENEFITS-- where properly applied and maintained

##### A. Practices Primarily for Establishment of Permanent Protective Cover

A-2. Establishment of permanent vegetative cover.--This practice is applicable only to land which should be established in permanent vegetative cover for protection against wind or water erosion, and to cropland which, as a part of needed land-use adjustment, is being shifted to permanent protective vegetative cover other than as a part of a regular crop rotation. Eligible seedings under this practice will be limited to straight seedings of perennial grasses or mixtures of perennial and/or biennial legumes and perennial grasses as approved by the county committee. The total weight of legumes eligible for cost-sharing in a mixture shall not exceed one-third the total weight of grasses in the mixture. On dry land in areas approximating 10 inches of annual rainfall, this practice will be approved only where demonstrations or research have proved that establishment of a stand is feasible. No Federal cost-sharing will be allowed under this practice for clearing land occupied by a merchantable stand of timber or pulpwood or for clearing land which, if cleared, would be suitable for continued production of cultivated crops.

Except as provided in section 4-D, cost-sharing may not be authorized for this practice on land on which this practice or practice B-1 was carried out or completed in 1958 or a subsequent year.



Good cover -- no erosion.

Perennial grasses and perennial or biennial legumes eligible for cost-sharing under this practice, with approval of the county committee, are set forth in section 3-E. Approved mixtures, seedbed preparation, and methods of seeding shall be substantially in accordance with the recommendations contained in Wyoming Interagency Job Sheet No. 2 for dry land and Wyoming Interagency Job Sheet No. 3 for irrigated land.

Seeding rates.--Recommended seeding rates on irrigated land range from 12 to 20 pounds per acre and on dry land from 5 to 10 pounds per acre.

Shaping, grading, and filling.--Cost-sharing will be allowed for the required shaping, grading, and filling necessary to establish a satisfactory vegetative cover.

Clearing.--Cost-sharing will be allowed for the clearing of trees and willows or sagebrush, greasewood, and other woody shrubs necessary to the successful establishment of the vegetative cover.

Nitrogen, phosphate, and mixed fertilizers.--Cost-sharing will be allowed for the application of nitrogen, phosphate, or mixed fertilizers on irrigated lands where, based on recognized local agronomic recommendations, the application of fertilizer is needed to successfully establish the seeding. It is recommended that phosphate be applied on the basis of a fertility test wherever possible. Nitrogen should be applied at a rate



which has been found to be practical in the area and should be placed below the seed or mixed in the soil. These applications may be made in the form of mixed fertilizers or as separate applications. Suitable evidence showing the amounts and types of fertilizer applied will be required by the county committee to support cost-sharing.

Construction of permanent fences.--Cost-sharing may be allowed for constructing permanent fences where fences are necessary to protect the seeded area and only for the extent necessary to fence that area. Cost-sharing for fencing shall be limited to permanent fences, excluding boundary fences and road fences. A fence will not qualify for cost-sharing under this practice unless it is constructed to remain on the site approved by the county committee for the normal lifespan of similar fences in the area, which in no case may be less than 5 years.

Construction specifications for fences approved under this practice shall be the same as those set forth under practice B-9.

Maximum Federal Cost-share:

- a. 80% of the cost of eligible seed, including inoculation costs, not to exceed \$7 per acre of permanent vegetative cover established.
- b. 50% of the cost of clearing, grading, shaping, and filling operations.
- c. 50% of the cost of nitrogen, phosphate, or mixed fertilizer, not to exceed \$6 per acre on irrigated land.
- d. 25 cents per rod for each new wire, not to exceed \$1.25 per rod of barbed wire fence constructed.
- e. \$1.25 per rod for combination barbed and woven wire fence constructed.

A-5. Contour stripcropping.--Cost-sharing will be allowed on non-irrigated land for the establishment of contour stripcropping to protect soil from water or wind erosion. Contour guidelines must be accurately established as a guide on each field and the distance between guidelines shall not exceed the interval of 6 feet vertically or 20 rods horizontally, whichever is closer. If contour stripcropping is established in connection with a new or existing terrace system, the terrace interval will determine the width of the contour strips. Two or more strips of intertilled row crops or fallow protected by two or more strips of close-grown crops or stubble will qualify. The strips of intertilled row crops or fallow must not average less than  $\frac{1}{2}$  rod or more than 12 rods in width, unless greater widths are approved by the county committee. Seeded grass strips may be substituted in whole or in part for one or more of the protective strips. The crop stubble or crop residue must be left standing over

winter, or a winter cover crop established, or necessary protective tillage operations carried out, on acreage devoted to row crops. All cultural operations must be performed as nearly as practicable on the contour. No cost-sharing will be allowed under this practice for any acreage on which contour stripcrop farming is currently established or for annual contour or cross-slope farming operations.

Maximum Federal Cost-share:

\$3 per acre of contour stripcropping established.

A-6. Field stripcropping.--This practice is for the establishment of field stripcropping to protect soil from wind or water erosion. Two or more strips of intertilled row crops or fallow protected by two or more strips of close-grown crops or stubble will qualify. The strips of intertilled row crops or fallow must not average less than  $\frac{1}{2}$  rod or more than 12 rods in width except upon prior approval of the county committee which may approve widths not to exceed 20 rods. The strips should be approximately the same width. The crop stubble or crop residue must be left standing over winter, or a winter cover crop established, or necessary protective tillage operations carried out on acreage devoted to row crops.

Maximum Federal Cost-share:

- a. \$1 per acre on which field stripcropping is established with strips exceeding 10 rods in width.
- b. \$2 per acre on which field stripcropping is established with strips 10 rods or less in width.

A-7. Establishment of a stand of trees or shrubs on farmland for purposes other than the prevention of wind or water erosion.--No cost-sharing will be allowed for planting orchard trees or for plantings for ornamental purposes. If shrubs are used, those which benefit wildlife should be given preference wherever practicable. Plantings will be limited to adapted trees or shrubs and same must be planted in accordance with an approved planting plan prepared and furnished by the Forest Service. Plantings must be protected from destructive fire and destructive grazing.

A minimum of 200 trees or shrubs per acre shall be planted and a stand of at least 160 living trees or shrubs must be present when performance is checked. Plantings for forestry purposes shall be in accordance with established forestry standards. Broadleaf trees shall be at least 1-year-old stock and evergreens 3-year-old stock. In determining the area to be planted to trees in single row plantings, a distance of 1 rod on either side of the row shall be included. On other plantings, measurements shall be taken from a distance of 1 rod beyond the two outside rows of trees.

Land preparation on nonirrigated land.--To provide needed moisture for successful survival of trees planted, land to be planted will be

summer followed the year preceding the planting and otherwise treated and cared for as specified in the planting plan furnished by the Forest Service.

Fencing.--Cost-sharing may be authorized for the construction of permanent fences for the purpose of protecting plantings under this practice. Federal cost-sharing will be limited to permanent fences and only for the extent necessary to fence the area planted to trees and shrubs under this practice. Boundary fences and road fences will not qualify. Construction specifications for fences under this practice shall be the same as those set forth under practice B-9.

Components.--Each of the established steps, i.e., (a) land preparation, (b) and (c) fencing, (d) planting and cultivation (first year), (e) cultivation (second year), and (f) cultivation (third year) will be considered as separate components of this practice. Required components must be performed in the above numerical sequence, except that the fencing component may be performed at any time that a fence is needed, as determined by the county committee, to protect the planting provided the fence is constructed not later than the fifth year following the year in which the trees or shrubs are planted. Cost-sharing cannot be paid on components (a) and (b) and (c) until component (d) (planting and cultivation first year) has been completed.

Maximum Federal Cost-share:

- a. \$2.50 per acre for land preparation on nonirrigated land.
- b. 25 cents per rod for each new wire, not to exceed \$1.25 per rod of barbed wire fence constructed.
- c. \$1.25 per rod for combination barbed and woven wire fence constructed.
- d. \$30 per acre for trees, planting, and cultivation (first year).
- e. \$2 per acre for cultivation (second year).
- f. \$2 per acre for cultivation (third year).

\*A-8. Establishment of a stand of trees or shrubs on farmland to prevent wind or water erosion.--Cost-sharing will be allowed only for windbreak, shelterbelt, gully stabilization, and streambank stabilization plantings. No cost-sharing will be allowed for planting orchard trees or for plantings for ornamental purposes. If shrubs are used, those that benefit wildlife should be given preference wherever practicable. Plantings will be limited to adapted trees or shrubs as listed on Wyoming Inter-agency Job Sheet No. 7 and same will be planted in accordance with the specifications prepared and approved by the technician. Plantings must be protected from destructive fire and destructive grazing.



A minimum of 200 trees or shrubs per acre shall be planted and a stand of at least 160 living trees or shrubs must be present when performance is checked. Broadleaf trees shall be at least 1-year-old stock and evergreens 3-year-old stock. In determining the area planted to trees in single-row plantings, a distance of 1 rod on either side of the row shall be included. On other plantings, measurements shall be taken from a distance of 1 rod beyond the two outside rows of trees.

Land preparation on nonirrigated land.--To provide needed moisture for successful survival of trees planted, nonirrigated land to be planted will be summer fallowed the year preceding the planting and otherwise treated and cared for as specified by the technician.

Fencing.--Cost-sharing may be authorized for the construction of permanent fences for the purpose of protecting plantings under this practice. Federal cost-sharing will be limited to permanent fences and only for the extent necessary to fence the area planted to trees and shrubs under this practice. Boundary fences and road fences will not qualify. Construction specifications for fences under this practice shall be the same as those set forth under practice B-9.

Construction of snow fences for water conservation.--Cost-sharing may be authorized for the construction of snow fences to provide supplemental water as an aid in the establishment of the trees and shrubs. Snow



Shelterbelts prevent wind and water erosion.

fences constructed under this practice must remain for permanent use on the location approved by the county committee. Before prior approval of this practice is granted, the technician shall determine the need, practicability, location, design, and construction standards. Approved construction materials consist of commercial snow fencing, slabs, or other materials approved by the county committee. Practice specifications shall be furnished the operator prior to construction. Such specifications shall require a minimum height of 4 feet and a maximum height of 8 feet. The snow fences may be either movable or permanent type structures. Posts which may be incorporated into the construction of permanently located snow fences under this practice must be (1) steel or concrete, (2) long-lived posts such as juniper, pitch, and whole cedar, and (3) short-lived posts such as pine, aspen and split cedar when treated by a process approved by the State Committee.

Approved processes are (1) commercial coal-tar creosote pressure treatment, (2) hot-and-cold bath creosote treatment, (3) pentachlorophenol commercial pressure treatment, (4) pentachlorophenol cold-soaking method, (5) osmose salt preservative treatment, or (6) osmoplastic preservative treatment. Vertical and horizontal slats used to deflect wind currents and supports not anchored in the ground must be new materials but need not be treated. It is recommended that the horizontal or vertical wind deflection slats be spaced so that not more than 40% to 50% of the surface is open. Snow fences retain drifted snow for a distance of approximately 5 to 9 times the height of the fence and should be placed or constructed at a distance and in a direction from the shelterbelt planting to pile snow in the most beneficial location.

Components.--Each of the established steps, i.e., (a) land preparation, (b) and (c) fencing, (d) planting and cultivation (first year), (e) cultivation (second year), (f) cultivation (third year), and (g) snow fences, will be considered as a separate component of this practice. Required components must be performed in the above numerical sequence, except that the fencing component may be performed at any time that a fence is needed, as determined by the county committee, to protect the planting provided the fence is constructed not later than the fifth year following the year in which the trees or shrubs are planted. Cost-sharing cannot be paid on components (a), (b) and (c), and (g) until component (d) (planting and cultivation first year) has been completed.

Maximum Federal Cost-share:

- a. \$2.50 per acre for land preparation on nonirrigated land.
- b. 25 cents per rod for each new wire, not to exceed \$1.25 per rod of barbed wire fence constructed.
- c. \$1.25 per rod for combination barbed and woven wire fence constructed.



- d. \$30 per acre for trees, planting, and cultivation (first year).
- e. \$2 per acre for cultivation (second year).
- f. \$2 per acre for cultivation (third year).
- g. 50% of the cost of approved materials used in snow fence construction.

B. Practices Primarily for Improvement and Protection of Established Vegetative Cover

B-1. Improvement of permanent grass, legume, or grass-legume cover. This practice is applicable only to land in permanent vegetative cover which needs more than normal maintenance measures in order to provide adequate soil or watershed protection. The improvement measures approved for cost-sharing shall be those which will extend materially the life of the vegetative cover. Federal cost-sharing may not be approved for normal maintenance measures such as annual topdressings with fertilizer or other mineral elements. This practice is not applicable to land on which the needed improvement measures will constitute complete reestablishment of the vegetative cover.

Except as provided in section 4-D, cost-sharing may not be authorized for this practice on land on which this practice or a practice involving the establishment of eligible vegetative cover was carried out or completed in 1958 or a subsequent year.

Seedbed preparation.--A seedbed shall be prepared by disking, chiseling, or otherwise disturbing the ground surface and present vegetation to permit the successful interdrilling of legumes and/or grasses.

Seeding rates.--Recommended seeding rates for improvement of vegetative cover under this practice will vary depending upon soil and moisture conditions of the site. Cost-sharing will be limited to not more than 10 pounds of seed per acre on dry land and not more than 20 pounds of seed per acre on irrigated land.

Perennial grasses and perennial or biennial legumes eligible for cost-sharing under this practice, with approval of the county committee, are set forth in section 3-E.

Nitrogen, phosphate, and mixed fertilizers.--Cost-sharing will be allowed for the application of nitrogen, phosphate, or mixed fertilizers on irrigated lands improved by seeding under this practice where, based on recognized local agronomic recommendations, the application of fertilizer is needed to successfully establish the seeding. It is recommended that phosphate be applied on the basis of a fertility test wherever possible. Nitrogen, if needed, should be applied at a rate which has been found to be practical in the area and must be mixed in the soil. These



applications may be made in the form of mixed fertilizers or as separate applications. Suitable evidence showing the amounts and types of fertilizer applied will be required by the county committee to support cost-sharing.

Renovation by cultivation.--Cost-sharing may be authorized for renovation by cultivation of permanent grass, legume, or grass-legume cover to provide more efficient utilization of rainfall and irrigation water as a means of improving permanent vegetative cover to protect land from erosion. The necessity for seeding of the area renovated by cultivation will be determined by the county committee.

Maximum Federal Cost-share:

- a. 80% of the cost of eligible seed including inoculation costs, not to exceed \$4 per acre of vegetative cover improved.
- b. 50% of the cost of nitrogen, phosphate, or mixed fertilizer, not to exceed \$6 per acre of irrigated land on which seeding was required.
- c. \$1 per acre where cultivation is performed to a depth of 4 inches or more.

B-2. Improvement or protection of vegetative cover on rangeland by artificial reseeding and/or firebreaks.--This practice is for the improvement or protection of vegetative cover on rangeland by artificial reseeding and/or firebreaks for soil protection. Cost-sharing will be allowed for seeding adapted perennial grasses or mixtures of adapted perennial grasses and adapted perennial or biennial legumes necessary to provide adequate soil protection on rangeland. The practice must be performed in accordance with the principles of sound range management.

Seeding rates.--The recommended seeding rates range from 4 to 6 pounds of grass seed per acre plus the optional inclusion of 1 pound per acre of adapted legumes. Perennial grasses and perennial or biennial legumes eligible for cost-sharing under this practice, with approval of the county committee, are set forth in section 3-E. Native grasses should be used when seed is available.

Seedbed preparation.--Seedbed requirements will vary depending upon the soil and moisture conditions of the site and the present occupying vegetation. Accordingly, seedbed preparation shall be the most effective for the site as determined by the county committee.

Seeded areas shall be protected until the stand is well established and no cost-sharing will be allowed if it is determined by the county committee that the area seeded is grazed during the period of establishment, or that any rangeland in the unit is overgrazed.

Firebreaks.--Cost-sharing may be authorized for the establishment of firebreaks to protect rangeland from fire. Firebreaks are eligible for cost-sharing only when constructed contiguously to the rangeland area protected. To qualify, the firebreaks shall be established during the spring of the year and maintained throughout the fire hazard season. All firebreaks shall have a minimum width of 5 feet of exposed soil kept free from vegetative growth by plowing or otherwise exposing mineral soil.

Maximum Federal Cost-share:

- a. 50% of the cost of seedbed preparation, seed, inoculation and planting, not to exceed \$4 (\$6 in Carbon County) per acre of land on which approved seed was sown and approved preparation and planting operations were carried out.
- b. \$1.50 per 1,000 linear feet of approved firebreak constructed prior to, and maintained throughout, the fire hazard season.

B-3. Controlling competitive shrubs.--Cost-sharing may be approved for controlling competitive shrubs necessary to permit growth of adequate, desirable, vegetative cover for soil protection on range or pasture lands. Competitive shrubs eligible for mechanical control under this practice are willows, hawthorne, sagebrush, greasewood, wild roses, and rabbitbrush. Competitive shrubs eligible for chemical control under this practice are willows, big sage, silver sage, black sage, sand sage, and greasewood. Mechanical control, to qualify for cost-sharing, must result in removal of at least 80% of the competitive shrubs. Chemical control, to qualify for cost-sharing, must result in a kill of not less than the percentage of kill required for the applicable shrub on Wyoming Interagency Job Sheet No. 9. In the year treated, the areas should be protected from grazing during the growing season to permit maximum reestablishment benefits of native vegetation and new seedlings. On areas where it is determined that the control of competitive shrubs will reduce the vegetative cover to such an extent as to induce erosion, the practice will not be approved unless followed by seeding. Required seedings may be approved for cost-sharing under practice B-2. No cost-sharing will be allowed for any acreage where the control measures are performed through normal farming operations in connection with land preparation for planting or cultivation of crops, or on any area which is grazed to a degree considered by the county committee to be detrimental to the growth of the desirable vegetative cover.

Maximum Federal Cost-share:

- a. 50% of the cost of control measures, not to exceed \$10 per acre of willows and/or hawthorne controlled.
- b. 50% of the cost of control measures, not to exceed \$6 per acre of other eligible shrubs controlled.



B-4. Contour furrowing or pitting rangeland.--Cost-sharing may be authorized for contour furrowing or pitting rangeland to prevent soil loss, retard runoff, and improve water penetration. In the year treated, the area should be protected from grazing during the growing season to permit maximum reestablishment benefits of native vegetation and new seedings. Seeding of the contoured or pitted areas may be required by the county committee and approved for cost-sharing under practice B-2.

Contour furrowing.--The horizontal and vertical distances between furrows and the cross-sectional area of furrows shall be of such dimensions that the runoff reflected by site conditions will be fully utilized. Furrow capacity shall be provided to utilize the runoff resulting from a minimum of 0.75 inch per hour of rainfall. In no case shall approval be given for furrows having a minimum cross-sectional area of less than 24 square inches or for furrows spaced more than 8 feet apart horizontally.

Pitting operation.--Pitting operation by an eccentric disk or other suitable implement may be approved provided full coverage is obtained.

Maximum Federal Cost-share:

50% of the cost of contour furrowing and pitting operations, not to exceed \$1 per acre of land on which approved operations are performed.

B-5. Wells for livestock water.--Cost-sharing may be approved for constructing or deepening livestock wells at locations which will bring about the desired protection of the vegetative cover through proper distribution of grazing or better grassland management or make practicable the utilization of the land for vegetative cover. All developments approved under this practice shall provide the anticipated needs of water storage for livestock using the area served. Approved storage must be constructed of concrete, rubble masonry, cement staves, redwood, or metal. An adequate waste drain must be installed where necessary to prevent miring and settlement of the storage structure. Power pumping equipment must be installed, except for flowing artesian wells. Artesian wells must be completed by adequately sealing the casing or tubing with cement or a packer gland and installing a cutoff device. An existing well may be deepened to provide adequate water for livestock on the adjacent area, but measurements showing the depth of the existing well must be recorded with the county committee before approval is granted. No cost-sharing will be allowed for the deepening of existing wells if the existing well by pumping will supply an adequate amount of water. Where a new well is drilled or an existing well is deepened, the maximum computed cost-share will be based on the smaller of (1) the first depth from which adequate water (other than artesian) can be pumped as shown by the driller's log at the applicable rate, or (2) the depth at which artesian water is discovered at the cost-share rate authorized under subdivision "a" below. Flowing artesian wells will qualify only under cost-share rate "a." Where wells are cased with pipe which falls within more than one cost-share level because of diameter variation, cost-shares will be calculated separately under "a," "b," or "c"



below. Cost-sharing will not be approved if the county committee determines that the area to be served by the development is overgrazed. The practice must be performed in accordance with the principles of sound range management. No cost-sharing will be allowed for wells constructed primarily for the use of headquarters, or for costs other than for constructing or deepening wells and for water storage facilities.

Cost-sharing under "e" below will be authorized only in those areas in Natrona County where the county committee determines that low-productivity sands are encountered and that an adequate supply of livestock water cannot be obtained with a well of smaller diameter. Cost-sharing for such wells will not be authorized for depths in excess of that at which there is obtained a supply of water adequate for the needs of livestock using the area served by the well. The use of water from such wells for irrigation will be considered a misuse of the practice.

Maximum Federal Cost-share:

- a. 75% of the cost of drilling and casing, not to exceed \$1.50 per linear foot of well with bore taking casings less than 4 inches but not less than 2 inches inside diameter and all artesian wells.
- b. 75% of the cost of drilling and casing, not to exceed \$2.50 per linear foot of well with bore taking casings of 4 or more inches but less than 5½ inches inside diameter.
- c. 75% of the cost of drilling and casing, not to exceed \$3.50 per linear foot of well with bore taking casings of 5½ inches or more inside diameter.
- d. 50% of the installed cost of approved water storage constructed
- e. 75% of the cost of drilling, casing, and gravel packing, not to exceed \$6.50 per linear foot of well with bore taking casings of 18 inches or larger inside diameter. (Applicable only in Natrona County.)

\*B-6. Developing springs or seeps for livestock water.--Cost-sharing may be approved for developing springs or seeps for livestock water to obtain proper distribution of grazing or better grassland management as a means of protecting vegetative cover, or to make practicable the utilization of the land for vegetative cover. A spring or seep shall be developed by digging out the source and curbing or cribbing a sufficient portion of the excavation with durable materials to prevent sloughing of banks and to concentrate the water flow. The source must be fully protected from surface drainage and from livestock trampling. Water must be conveyed from a developed source through a pipe to a wooden, metal, concrete, or rubble masonry tank or trough. A waste drain must be installed when necessary to prevent miring or settlement of the trough. The minimum storage available to livestock shall not be less than 20 cubic feet.



Good water -- an essential tool of range management.

Where the above type of development is impracticable, any other type of development which, in the opinion of the technician, conforms with good range practice and which provides adequate available storage of water shall qualify for cost-sharing.

All developments approved under this practice shall provide the anticipated minimum needs of water storage for livestock using the area served. The practice will not be approved if the county committee determines that the area to be served by the development is overgrazed. Before approving development of a spring, the technician shall determine that the water is satisfactory for livestock consumption.

Maximum Federal Cost-share:

50% of the installed cost of approved permanent structures constructed.

\*B-7. Dams, pits, or ponds for livestock water.--Cost-sharing may be approved for constructing, enlarging, or sealing dams, pits, or ponds at locations which will bring about the desired protection of vegetative cover through proper distribution of grazing or better grassland management or make practicable the utilization of the land for vegetative cover. Dams or pits under this practice shall be constructed in accordance with plans and specifications approved by the technician and furnished to the



producer prior to construction. All applicable water laws of the State shall be observed in connection with all structures built under this practice. This practice will not be approved if the county committee determines that the area to be served by the development is overgrazed. No cost-sharing will be allowed for cleaning or maintaining an existing structure.

Earthen dams.--Top width of dams shall be determined on the basis of sound structural design, as determined by the technician, but in no case shall the top width be less than 3 feet. Slopes shall not be steeper than 3 to 1 on the upstream and 2 to 1 on the downstream slopes. Maximum freeboard requirement shall be determined on the basis of sound structural design, as determined by the technician, but in no case shall the freeboard be less than 4 feet. The spillway cross section shall be adequate to carry anticipated runoff and shall be adequately protected. Supplemental specifications will provide for a mechanical spillway whenever the rate or volume of runoff is such that a natural or excavated spillway will not function properly.

The design and construction specifications prepared for all dams must be approved by the responsible technician and furnished to the co-operator prior to construction. Special plans and specifications will be required for earthen dams impounding water in excess of 20 feet in depth or storing more than 100 acre-feet, concrete dams, and rubble masonry dams, and these structures must receive special approval in accordance with established Soil Conservation Service procedure.

Earthen pits.--Where the construction of a dam is impracticable, an earthen pit may be excavated, provided the excavation is made in a natural basin or relatively flat drainage area. Such pit shall have a depth of not less than 8 feet from the bottom to the ground level at the outlet, except that if live water is encountered at least 2 feet of water depth is required. Where soil borings establish that high water loss sands and gravels underlay the majority of the pit site at depths less than 8 feet, the technician may determine the feasibility of excavation to a lesser depth provided such depth shall be not less than 5 feet with a minimum of 1 foot of impervious material left in place over pervious sand and gravels. The slopes on any one side shall not be steeper than 3 to 1, except where authorized by the technician in areas where undisturbed stable bedrock is encountered. Where a pit is constructed in excess of 12 feet in depth, or having side slopes flatter than 4 to 1, the yardage for cost-sharing purposes will be limited to 12 feet in depth and to slopes not flatter than 4 to 1. Cost-sharing will be allowed only for the yardage excavated.

Sealing earthen reservoirs.--Cost-sharing may be allowed for lining leaky reservoirs and pits with bentonite, butyl rubber, or approved asphaltic base membrane lining for the purpose of conserving livestock water supplies needed in obtaining proper distribution of livestock on grazing land. The lining must be installed in accordance with plans and specifications which will be approved by the technician and furnished to the producer prior to installation of the lining.



In Laramie County, cost-sharing may be allowed for sealing earthen reservoirs with salt. Representative soils from the site to be lined shall be analyzed by a recognized soils laboratory and the treatment approved will be limited to that recommended by the laboratory.

Riprap.--Area of riprap, for purposes of computing cost-shares, shall include that surface of riprap exposed to the waterside of the dam or spillway channel, not to exceed the height of the dam protected, and any other areas subject to erosion and riprapped in accordance with recommendations of the technician.

Installation of outlets in existing dams.--Where outlet tubes are installed in an existing dam, the installation will be carried out in accordance with plans furnished by the responsible technician. Cost-sharing may be authorized for all approved materials used, excavation, backfill, pipe driving and other approved operations carried out in completing the installation.

Maximum Federal Cost-share:

- a. 60% of the cost of foundation preparation, fill construction, and spillway construction for dams; and 60% of the cost of approved yardage excavated for pits.
- b. 60% of the cost of site clearance and the construction of inlet and outlet facilities.
- c. 60% of the installed cost of approved riprap or other approved structures constructed to protect approved areas from erosion.
- d. 50% of the installed cost of approved lining.

\*B-8. Installing pipelines for livestock water.--Cost-sharing may be allowed for installing pipelines, including the required livestock water storage facilities, as a means of protecting vegetative cover. The pipelines must deliver water to locations which will bring about the desired protection of vegetative cover through proper distribution of grazing or better grassland management or make practicable the utilization of the land for vegetative cover. The practice will not be approved if the county committee determines that the area to be served by the development is overgrazed. Pipelines and storage constructed under this practice must remain for permanent use on the location approved by the county committee. The pipe and fittings may be plastic or metal and shall be of standard quality not less than 3/4 inch in diameter. For pipelines larger than 2 inches in diameter, cost-sharing will be limited to the rate applicable to 2-inch pipe and fittings of identical quality. Metal pipelines must either be buried to a depth below frost penetration or be equipped with drain valves to prevent damage from freezing. Plastic pipelines must be buried to a minimum of 1 foot in depth.

The required storage must be of concrete, rubble masonry, cement staves, redwood, or metal. An adequate waste drain must be installed where necessary to prevent miring and settlement of the storage structure.

Maximum Federal Cost-share:

50% of the installed cost of pipe, approved fittings, and water storage facilities.

B-9. Construction of permanent fences as a means of protecting vegetative cover.--This practice may be approved only where fencing will contribute to better distribution of livestock and seasonal use of the forage. Fences between pasture and land being used to produce a crop other than pasture and fences along public roads are not eligible for cost-sharing. Cost-sharing will be allowed for new fences constructed of new materials and in strict adherence to the specifications set forth below, provided such fences are constructed for the sole purpose of providing improved livestock management on grazing land.

Posts which may be incorporated into construction of fences for cost-sharing under this practice must be (1) steel or concrete, (2) long-lived posts such as juniper, pitch, and whole cedar, and (3) short-lived posts such as pine, aspen, and split cedar when treated by a process approved by the State Committee. Approved processes are (1) commercial coal-tar creosote pressure treatment, (2) hot-and-cold bath creosote treatment, (3) pentachlorophenol commercial pressure treatment, (4) pentachlorophenol cold-soaking method, (5) osmose salt preservative treatment, or (6) osmoplastic preservative treatment. All wooden posts shall be large enough in diameter throughout the entire length to adequately support the weight of the fence, hold staples, and otherwise give satisfactory service.

The repairing, replacement, reconstruction, addition of wires, and/or posts to an existing fence will not qualify for cost-sharing under this practice.

All barbed wire fences constructed under this practice must have at least three new wires No. 13½ standard gage or heavier. All wires must be tightly stretched and corners must be adequately braced. Posts must not be more than 25 feet apart with stays as required by the county committee.

Combination barbed and woven wire fences must have all wires tightly stretched with not less than one new No. 13½ standard gage barbed wire above the woven wire. Corners must be adequately braced. Posts must not be more than 20 feet apart with stays as required by the county committee.

Buck and pole fences shall have at least four poles or standard No. 13½ gage barbed wires on one side and one on the other. Bucks must not be more than 16 feet apart and securely braced. Worm-type fences shall be constructed not less than 4 feet in height. The maximum spacing of spans shall not exceed 14 feet and the maximum angle in spans shall not exceed 135 degrees. Fence logs shall be 8 inches or more in diameter at



the smaller end. Two tie posts having a minimum diameter of 6 inches or more shall be used at each cross-point of the fence logs. These tie posts shall be placed one on each side of the fence logs and securely wired at top and bottom with No. 14 gage or heavier galvanized wire. The tie post must rest upon sills so that the bottom line of the fence will be approximately 6 inches off the ground. Sills may consist of flat rocks having a minimum dimension of approximately 6 inches by 12 inches by 16 inches. Where rock is not readily obtained, logs 16 inches in diameter and 4 feet long may be used for sills. Poles shall be stripped or seasoned before use and large enough to withstand snow weight without undue sagging.

Maximum Federal Cost-share:

- a. 25 cents per rod for each new wire, not to exceed \$1.25 per rod of barbed wire fence constructed.
- b. \$1.25 per rod for combination barbed and woven wire fence, buck and pole fence, or worm-type fence constructed.

B-10. Improvement of a stand of forest trees on farmland by thinning.--Cost-sharing may be approved for improving a stand of forest trees on farmland by thinning out suppressed and malformed trees to convert stagnated unproductive areas of dense timber growth to productive timberland. Cost-sharing will be limited to thinning stands of potentially commercial coniferous saplings so heavily stocked that growth of trees is stagnated. As carried out, the thinning job will remove suppressed and malformed trees, leaving sufficient well-formed, dominant, and co-dominant trees to make up a reserve stand with a minimum spacing of 8 feet by 8 feet, not to exceed 12 feet by 12 feet. The area must be protected from destructive fire.

Timber stands approved for this practice will be confined to sapling stands where the dominant trees are at least 4.5 feet in height, and where the trees to be removed do not exceed 5 inches in diameter at a point 4.5 feet above the ground. A field examination will be made before any area is approved for this practice.

The cuttings may be left on the ground to decompose and build up the soil. Trees cut should be felled in such a way that they lie at right angles to the slope and parallel to one another in close contact to the ground. Branches of felled trees which reach over two feet above ground level should be lopped off the main stem.

As a fire protection measure, all slash resulting from thinning must be removed for a distance of 100 feet around all buildings. In addition, fire lanes 20 feet in width must be cleared of thinning slash, such lanes to be located so that the area of continuous thinning slash is broken up into small blocks of 10 acres or less.

The Forest Service is responsible for the technical phases of this practice and the practice must be carried out in accordance with approved



technical forestry standards. No Federal cost-sharing will be allowed under this practice for thinning operations on the same acreage under subsequent programs.

Maximum Federal Cost-share:

50% of the cost, not to exceed \$20 per acre.

B-11. Constructing stock trails to provide better distribution of livestock.--Cost-sharing may be approved for the construction of trails for actual travel use by livestock to and from relatively inaccessible areas of grass or water, where such trails will accomplish better grazing land management and distribution of livestock in the area. All trails shall be properly drained to prevent water erosion. A trail constructed on a 10% or more slope must be built with water bars approximately every 50 linear feet, or as near to that as practicable. All trails shall be constructed with a minimum width deemed adequate for the site by the county committee, but in no case will widths of less than 4 feet be approved. Cost-sharing will be allowed only for that part of the trail located in terrain where livestock cannot move readily during the season in which the area is normally grazed.

No cost-sharing will be allowed if the county committee determines that the area thus made available is overgrazed. All sites on which trails are to be constructed must be inspected by a representative of the county committee before construction is started.

Maximum Federal Cost-share:

- a. 50% of the cost, not to exceed \$10 per 100 linear feet of stock trails constructed by mechanical means.
- b. 50% of the cost, not to exceed \$3 per linear foot of stock trails constructed with dynamite or other explosives.

C. Practices Primarily for the Conservation and Disposal of Water

\*C-1. Establishing sod waterways.--Cost-sharing may be allowed for the establishment of permanent sod waterways to dispose of excess water without causing erosion. Cost-sharing may be authorized under this practice for shaping and seeding of natural and artificial drainageways and for the required enlargement, reshaping, or reseeding of inadequate systems for (1) disposal of concentrated flow from terrace diversions, etc., and (2) natural drains that convey runoff across the farm. Side field outlets may be constructed but preference should be given to natural drains that require less grading and which usually have a flatter grade. The waterways may not be grazed until the cover is well established. Waterways should be established at least 1 year before any extra water is diverted into them.

The channel of the waterway must be sufficiently wide at all points to carry all water diverted into it under conditions of maximum probable rainfall, but cost-sharing will be limited to a maximum average width of 100 feet. Waterways with an average width of less than 20 feet will not be approved.

Design and construction specifications, which must meet SCS technical standards for the State, will be prepared by the technician and furnished to the producer prior to beginning construction.

Establishment of vegetation.--Federal cost-sharing will be allowed for the establishment of protective vegetation in waterways by seeding adapted perennial grasses. Grasses eligible for cost-sharing under this practice are set forth in section 3-E. As determined by the county committee, approvals will be limited to the best sod-forming grasses for the site and the seedbed will be prepared in a workmanlike manner.

The recommended seeding rate ranges from 15 to 25 pounds per acre. Seed must be sown in a workmanlike manner and may be either drilled or broadcast. If broadcast, the seed shall be properly covered and packed as determined by the county committee. A guide for the planting will be prepared on Wyoming Interagency Job Sheet No. 4 and given to the producer prior to planting.

Nitrogen, phosphate, and mixed fertilizers.--Cost-sharing will be allowed for the application of nitrogen, phosphate, or mixed fertilizers where, based on recognized local agronomic recommendations, the application of fertilizer is needed to successfully establish the seeding. It is recommended that phosphate be applied on the basis of a fertility test wherever possible. Nitrogen should be applied at a rate which has been found to be practical in the area and shall be placed below the seed or mixed in the soil. These applications may be made in the form of mixed fertilizers or as separate applications. Suitable evidence showing the amounts and types of fertilizer applied will be required by the county committee to support cost-sharing.

Maximum Federal Cost-share:

- a. 80% of the cost of earth moved in grading, shaping, or filling.
- b. 80% of the cost of eligible seed, not to exceed \$10 per acre of permanent vegetative cover established.
- c. 80% of the cost of nitrogen, phosphate, or mixed fertilizer, not to exceed \$10 per acre.

C-2. Permanent vegetative cover to protect against erosion.--Cost-sharing may be allowed for the establishment of permanent vegetative cover to stabilize and protect gullies, dams, dikes, levees, ditchbanks, farm roadsides, filter strips, field borders, and similar problem areas. Any



adapted grasses, legumes, shrubs, or trees planted alone or in combination, which are approved by the county committee, will be eligible for cost-sharing under this practice when planted for the purpose of establishing vegetation to stabilize the soil and prevent erosion. Consideration should be given by the county committee to selecting those plants which will furnish wildlife food and cover.

Depending upon the soil and moisture condition of the site, grasses, shrubs, or trees must be planted at rates and in the manner recommended by the county committee. Where necessary to the proper establishment of vegetation, the county committee will require that the area to be vegetated be shaped or leveled in accordance with the specifications recommended by the county committee. Where grass and/or legume seedings are made, a firm seedbed will be required to facilitate the establishment of permanent sod. Grasses and/or legumes must be seeded in a manner approved by the county committee. Field borders or turn rows on which permanent vegetation is being established by seeding under this practice must be not less than 10 feet or more than 25 feet in width. A guide for each planting will be prepared on Wyoming Interagency Job Sheet No. 5 and given to the producer prior to planting.

Nitrogen, phosphate, and mixed fertilizers.--Cost-sharing may be allowed for the application of nitrogen, phosphate, or mixed fertilizers where, based on recognized local agronomic recommendations, the application of fertilizer is needed to successfully establish the seeding. It is recommended that phosphate be applied on the basis of a fertility test wherever possible. Nitrogen should be applied at a rate which has been found to be practical in the area and shall be placed below the seed or mixed in the soil. These applications may be made in the form of mixed fertilizers or separate applications. Suitable evidence showing the amounts and types of fertilizer applied will be required by the county committee to support cost-sharing.

Filter strips.--Federal cost-sharing will be allowed for establishing filter strips above ponds and diversions to minimize siltation. Filter strips must be at least 100 feet in length per square mile of drainage area and must have a minimum width which will accommodate the maximum width of water flow.

Maximum Federal Cost-share:

- a. 80% of the cost of adapted and approved grasses, legumes, shrub seedling stocks, and trees planted, including inoculation costs, not to exceed \$20 per acre of permanent vegetative cover established.
- b. \$5 per acre of seedbed preparation requiring hand labor or other specialized operations.
- c. 80% of the cost of nitrogen, phosphate, or mixed fertilizer, not to exceed \$10 per acre.



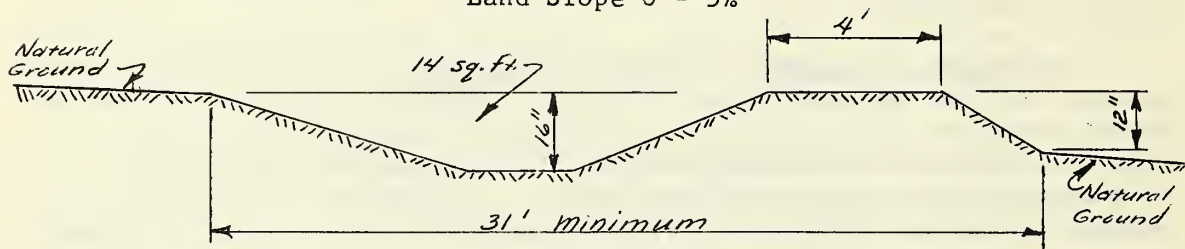
\*C-4. Gradient and level terraces.--Cost-sharing may be authorized for constructing terraces to detain or control the flow of water and check soil erosion on sloping land provided all farming operations except harvesting are carried out substantially parallel with the terraces. The terrace systems shall be protected from drainage areas above by conservation or erosion control measures as determined by the supervising technician. Construction of gradient or level terraces for water conservation and erosion control must be in accordance with the following stated design and specifications.

The channel capacity, channel depth, or ridge height and overall width of the terrace cross section are shown below for the range of land slopes specified. Proper outlets for disposal of water must be provided. Type of terrace cross section as shown in the following diagrams shall be determined by the representative slope of the area being terraced.

#### LEVEL TERRACES

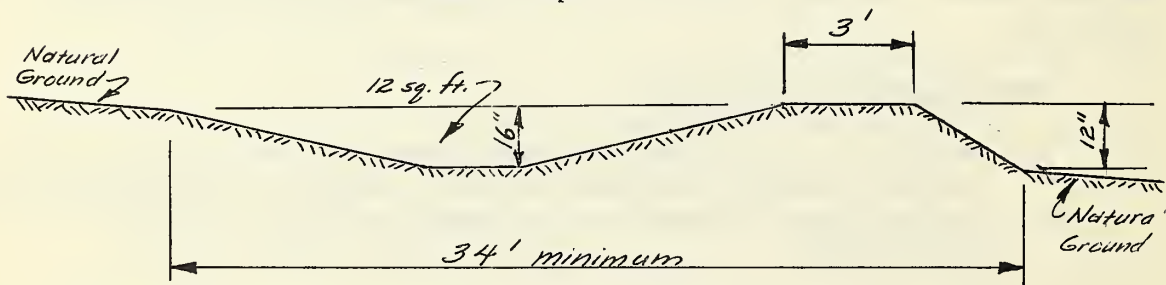
##### Type I

Land Slope 0 - 5%



##### Type II

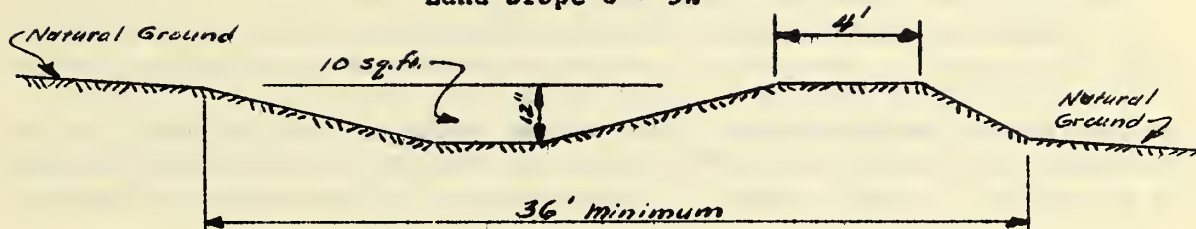
Land Slope 6 - 12%



## DRAINAGE TERRACES

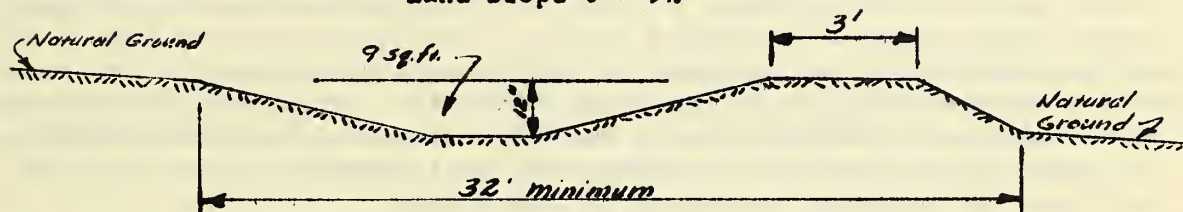
### Type III

Land Slope 0 - 5%



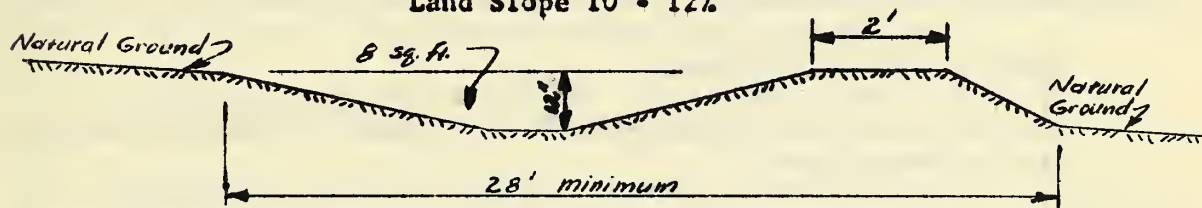
### Type IV

Land Slope 6 - 9%



### Type V

Land Slope 10 - 12%



Vertical dimensions shown are settled height. Constructed height will depend on equipment used and may require an increase of from 10% to 50% to allow for settlement. Slopes of the terrace ridge and channel must be built to a farmable section.

Level terraces are to be employed only on soils with a high rate of infiltration overlying permeable material.

Drainage terraces are to be constructed to a grade that will provide adequate drainage but shall not exceed 0.4 foot per 100 feet, except

under conditions where the terrace alignment is changed to provide for a more farmable field, in which case the grade may be increased for short reaches. Grades may also be increased in the 50-100 feet above the outlet to provide for free flow.

Terracing will start at the top of the field. The top terrace shall be located at the proper vertical interval below the average high point of the field with due consideration being given to the length of ground run and drainage area. The maximum vertical interval shall not exceed that established in the SCS technical standards, giving consideration to geographic location, range of slope, soils, land use, and treatment.

Maximum Federal Cost-share:

2½ cents (3 cents in Converse, Goshen, Laramie, Platte, and Weston Counties) per linear foot of terrace constructed.

\*C-5. Diversion terraces.--Cost-sharing may be authorized for constructing diversion terraces, ditches, or dikes to intercept runoff and divert excess water to protected outlets. The terrace system shall be protected from drainage areas above by conservation or erosion control measures as determined by the supervising technician. Diversion terraces must be constructed in accordance with the following specifications and any additional specifications recommended by the responsible technician and must meet SCS technical standards for the State.

The capacity of the channel must be large enough to divert the maximum runoff from the drainage area based on a 10-year frequency. Ditch grades must provide for nonerosive velocities but be steep enough to prevent excessive silting. The height of the ridge may be increased from 10% to 50% to allow for settlement.

Maximum Federal Cost-share:

80% of the cost of earthmoving, not to exceed 18 cents per cubic yard of earth moved.

\*C-6. Erosion control, detention, or sediment retention dams.--Cost-sharing may be authorized for constructing erosion control, detention, or sediment retention dams, including the enlargement of inadequate structures, to retard or reduce the rate of runoff of water or prevent erosion, siltation, or sediment damage.

All installations under this practice shall be in accordance with standard SCS plans or individual plans prepared for specific job sites and approved by the responsible technician and must meet SCS technical standards for the State. The design and construction specifications prepared for all dams must be furnished to the producer prior to construction.



Earthen dams.--Special plans and specifications will be required for earthen dams in excess of 25 feet in height or detaining more than 100 acre-feet of water. Dams under this practice must be designed to temporarily detain flood flow and automatically release it downstream at a non-damaging rate. Permanent storage capacity behind these dams shall not exceed the calculated volume required for sediment storage accumulated during the design life of the structure.

Spillways and outlets.--All earthen dams shall have an emergency spillway with sufficient capacity to carry the flow from the drainage area produced by a 25-year, 6-hour storm.

All dams shall have an uncontrolled pipe outlet to draw down flood flow to the maximum sediment pool elevation or lower and release it downstream at a rate which will not cause damage. The size and type of pipe outlet required shall be determined by the technician. To prevent plugging, the minimum diameter straight or hood inlet type pipe shall be 8 inches. The minimum diameter of the horizontal barrel of vertical drop inlets shall be 12 inches.

All flood detention dams shall be designed to have sufficient flood storage capacity between the uncontrolled outlet pipe and the crest of the emergency spillway to handle the inflow from the drainage area of a 10-year, 6-hour storm without permitting flow through the emergency spillway.

All erosion control or sediment retention dams having earth spillways shall be designed so that the maximum sediment pool elevation is not higher than 1 foot below the elevation of the crest of the emergency spillway.

In addition, erosion control or detention dams and sediment retention dams may require drains located near the bottom of the sediment pool level. The minimum size of drain pipes shall be 8 inches.

Anti-seep collars.--All pipes through dams shall have sufficient anti-seep collars to increase the path of percolation by at least 15 percent.

Freeboard.--Minimum difference in elevation between the crest of the emergency spillway and the top of the dam shall be determined on the basis of sound structural design as determined by the technician but in no case shall it be less than 5 feet.

Top width.--Top width of dams shall be in accordance with sound technical design as determined by the technician but in no case may the top width be less than 8 feet.

Side slopes.--The steepest permissible side slopes on dams shall be 3 to 1 on the upstream slope and 2 to 1 on the downstream slope, based on settled fill.

Wave action protection.--The upstream face of dams and spillways subject to wave damage shall be protected as determined by the technician. Area of protection, for purposes of computing cost-sharing, shall include that surface exposed to the water side of the dam, or spillway channel, not to exceed the height of the dam protected and any other areas subject to erosion and protected in accordance with determinations by the technician.

Installation of outlets or drains in existing dams.--Where pipe outlet spillways are installed in an existing dam, the installation will be carried out in accordance with plans and specifications furnished by the technician. Cost-sharing may be authorized for all approved materials used, excavation, backfill, and other approved operations carried out in completing the installation.

Rock or rock-and-brush structures.--Small grade stabilization structures may be constructed of rock, or a combination of rock-and-brush, and shall be designed to withstand heavy overflow without undermining or washing around the ends. The spacing between such structures in a drain-ageway shall be such that the gradient between the base of one dam and the crest of the next downstream dam is on a nonerosive slope. Maximum height of rock or rock-and-brush grade stabilization dams is 5 feet.

Maximum Federal Cost-share:

- a. 80% of the cost of foundation preparation, fill construction, and spillway construction.
- b. 80% of the cost of site clearance and the construction of inlet and outlet facilities.
- c. 80% of the installed cost of approved riprap or other structures constructed to protect approved areas.
- d. \$2.50 per cubic yard of rock used in rock or rock-and-brush dams.

\*C-7. Channel lining, chutes, or similar structures.--Cost-sharing will be allowed in connection with the installation of any of the foregoing structures when their purpose and function is to dispose of water without gullyng. Construction in connection with the reorganization of farm irrigation systems will not be eligible for cost-sharing under this practice. All installations under this practice shall be in accordance with standard SCS plans or individual plans prepared for specific job sites, and approved by the responsible technician, and must meet SCS technical standards for the State.

Open drop spillways.--These structures may be built of concrete, rubble masonry, concrete blocks or treated timber. The freeboard on the structure at design flow shall be a minimum of 6 inches. The apron or stilling basin of these structures shall set at or below the elevation of a nonerosive gradeline extending downstream.



Earthfill used to connect the structure with natural earth bank abutments shall have up and down stream slopes not steeper than 2 to 1. The minimum top width of such fills shall be 1 foot plus 1 foot for each foot of drop up to 5 feet. Higher drops shall have a top width in accordance with sound technical design as determined by the technician. Settled height of fills shall be a minimum of 4 inches above top of the walls of the structure. The upstream face of the structure shall be back-filled to the elevation of the crest of the drop when necessary. Such backfill shall have a minimum slope of 3 to 1.

Pipe drops.--These structures may be of the drop inlet type or the hood inlet type. They may be built of poured concrete, precast concrete pipe, metal pipe, or other acceptable pipe material.

For these pipe drops the size of pipe used shall be based on the barrel of the pipe operating at not less than 80% of full pipe capacity at design flow. All pipe drops shall have sufficient anti-seep collars to increase the path of percolation by at least 15%.

Earthfill used as part of pipe drop structures shall conform in top width and side slopes to requirements for erosion control, detention, or sediment retention dams.

The outlet end of pipe drops shall be set not less than 1 foot or more than 2 feet above a stable downstream gradeline. The outlet section of the pipe shall be essentially parallel to the ground line of the downstream channel. All pipe drops shall have adequate trash racks and anti-vortex devices at the inlet as determined by the technician.

Chutes.--Chutes may be built of concrete or metal. The maximum velocity in chutes shall be 2.5 times the critical velocity or 15 feet per second, whichever is less. Chutes shall not contain abrupt horizontal bends or abrupt grade changes.

Chutes may be designed to take all or a portion of the design maximum flow. Where a portion of the flow is taken in a vegetated channel, the channel shall be designed in accordance with the principles establishing sod waterways.

Treated timber.--All lumber, except redwood, used in structures shall be treated by (1) commercial coal-tar creosote pressure treatment, (2) hot-and-cold bath creosote treatment, (3) pentachlorophenol commercial pressure treatment, (4) pentachlorophenol cold-soaking method, (5) osmose salt preservative treatment, or (6) osmoplastic preservative treatment. Creosote or pentachlorophenol applied with a brush, a spray, or any method other than prescribed standard methods for the above will not qualify.

All lumber, except batten strips, must have a minimum 2-inch nominal dimension. Unless tongue and groove lumber is used, batten strips of metal or treated lumber must be appropriately placed on all joints between planks or boards to prevent leakage caused by lumber shrinkage.



Concrete blocks.--Where concrete blocks are used, cost-sharing will be limited to prefabricated concrete blocks having mineral rock and sand as an aggregate. All joints between blocks must be mortared and all molded voids filled with mortar.

Rubble masonry.--Rubble masonry shall be constructed by first placing clean durable rock or stone in a bed of mortar. Additional mortar shall be placed in voids between the rock or stone so that a relatively uniform surface results with a minimum projection of the rock or stone above the mortar. Rubble masonry walls shall be limited to 5 feet in height.

Riprap.--Cost-sharing may be approved for riprap required to prevent erosion adjacent to approved structures. The technician will delineate areas requiring riprap protection and provide the producer with construction plans.

Maximum Federal Cost-share:

- a. 80% of the installed cost of approved eligible structures.
- b. 80% of the installed cost of approved riprap constructed.

\*C-8. Streambank or shore protection, channel clearance, enlargement or realinement, or construction of floodways, levees, or dikes, to prevent erosion or flood damage to farmland.--Cost-sharing may be authorized for the foregoing installations. Levee or dike construction is limited to embankments of low height along watercourses or to protect farmland from overflow of backwater. This practice shall not be approved in cases where there is any likelihood that it will create an erosion or flood hazard to other adjacent land. No Federal cost-sharing will be allowed for construction under this practice, the primary purpose of which is to bring new land into agricultural production.

All installations, including channel shaping, protective works, and the removal of brush, trees, and boulders, must be in accordance with designs and specifications recommended by the responsible technician. Such designs and specifications must meet SCS technical standards for the State and will be furnished to the producer prior to construction.

All channel changes must receive special approval in accordance with established SCS procedures. Channel changing is limited to small watercourses having an average peak flood flow up to 500 cubic feet per second. Loose rock placed by a bulldozer or other earthmoving equipment on channel banks for streambank stabilization will qualify for cost-sharing only where this method is approved by the technician and, where approved, cost-sharing will be approved only under "a" below.

Maximum Federal Cost-share:

- a. 50% of the cost of moving earth and rock in streambank stabilization or enlargement, realinement, or construction of floodways, levees, or dikes.
- b. 80% of the installed cost of approved riprap and silt fence constructed.

\*C-9. Open drainage systems.--Cost-sharing may be authorized for constructing or enlarging permanent open drainage systems to dispose of excess water, and to permit land-use adjustments needed in establishing soil conserving cropping systems, or to permit other measures required to conserve soil and water resources. No Federal cost-sharing will be allowed for ditches, the primary purpose of which is to bring new land into agricultural production. This practice is not applicable to land other than that devoted to the production of cultivated crops or crops normally seeded for hay or pasture in the area during at least 2 of the last 5 years. Cost-sharing will not be authorized for structures for crossings or for other structures primarily for the convenience of the farm operator. Cleaning or other maintenance of established drains or excavation in connection with tile drains will not be approved for cost-sharing under this practice. In unstable soils having a high water table, the county committee may, for the purpose of lowering the water table and stabilizing side slopes, approve a pilot drain ditch constructed to partial depth and width of the completed drain designed for the site. Drainage construction by successive steps will be approved by the county committee only where recommended by the technician as the only feasible method of construction. In the installation of drainage systems, due consideration shall be given to the maintenance of wildlife habitat. Cost-sharing or technical assistance shall not be authorized for draining land described as Wetland Type 3, 4, or 5 in the U. S. Department of the Interior, Fish and Wildlife Service Circular 39, "Wetlands of the United States," published in 1956.

Side slopes shall not be steeper than  $1\frac{1}{2}$  to 1 unless solid materials are encountered, in which case the technician may recommend and the county committee may approve steeper side slopes.

Bottom widths shall not be less than 3 feet. The maximum grade for all ditches shall be such as to limit the flow to nonerosive velocities based on the type of soils encountered. The minimum grade shall be not less than 2.5 feet per 1,000 linear feet, except in specific cases where the technician approves a lesser grade. Earth excavated shall be placed in accordance with plans recommended by the technician. Such recommendations may include requirements such as the leveling of spoil banks or provisions for berms of specific dimension. Cost-sharing may be authorized for the spreading of spoil banks in accordance with a plan recommended by the technician when this is essential to the effective utilization of the drainage system. Where surface water is to be let into drains, it will be required that adequate erosion control structures be installed in accordance with plans recommended by the technician. Subsurface drains shall be



approved only when the technician and the county committee are satisfied that the necessary investigations have been made to determine feasibility, the most effective location, depth, gradient, and cross section of the proposed drain. All installations will be in accordance with plans and specifications approved by the responsible technician and must meet SCS technical standards for the State. A copy of such plans and specifications will be furnished to the producer prior to construction.

Maximum Federal Cost-share:

- a. 50% of the cost of excavating and placing earth in constructing the drain, not to exceed 14 cents (20 cents in Carbon County, 25 cents in Uinta County) per cubic yard of earth excavated.
- b. 50% of the installed cost of approved erosion control structures constructed.
- c. 50% of the cost of earth moved in spreading spoil banks.

\*C-10. Underground drainage systems.--Tile, concrete, fiber, or cement asbestos drains may be constructed to dispose of excess water and to permit land-use adjustments needed in establishing soil conserving cropping systems, or to permit other measures required to conserve soil and water resources. No Federal cost-sharing will be allowed for systems, the primary purpose of which is to bring new land into agricultural



Tile drain removes damaging subsurface water from irrigated cropland.



production. This practice is not applicable to land other than that devoted to the production of cultivated crops or crops normally seeded for hay or pasture in the area during at least 2 of the last 5 years. Drainage trenches shall be excavated to a depth and width adequate to permit proper installation of the tile or pipe on a grade that provides free flow for the entire length of the installation. No cost-sharing will be allowed for repairing or maintaining existing drains. Cost-sharing may be authorized for tile or pipe laid in open ditches where the cost was shared for such ditches under a previous program, where the technician and the county committee jointly determine that conversion of the open drain to an underground drain is essential in continuing the effectiveness of the practice. In such cases, however, cost-sharing will be limited to 50% of the cost of materials and installation, excluding backfilling costs. In the installation of drainage systems, due consideration shall be given to the maintenance of wildlife habitat. Cost-sharing or technical assistance shall not be authorized for draining land described as Wetland Type 3, 4, or 5 in the U. S. Department of the Interior, Fish and Wildlife Service Circular 39, "Wetlands of the United States," published in 1956.

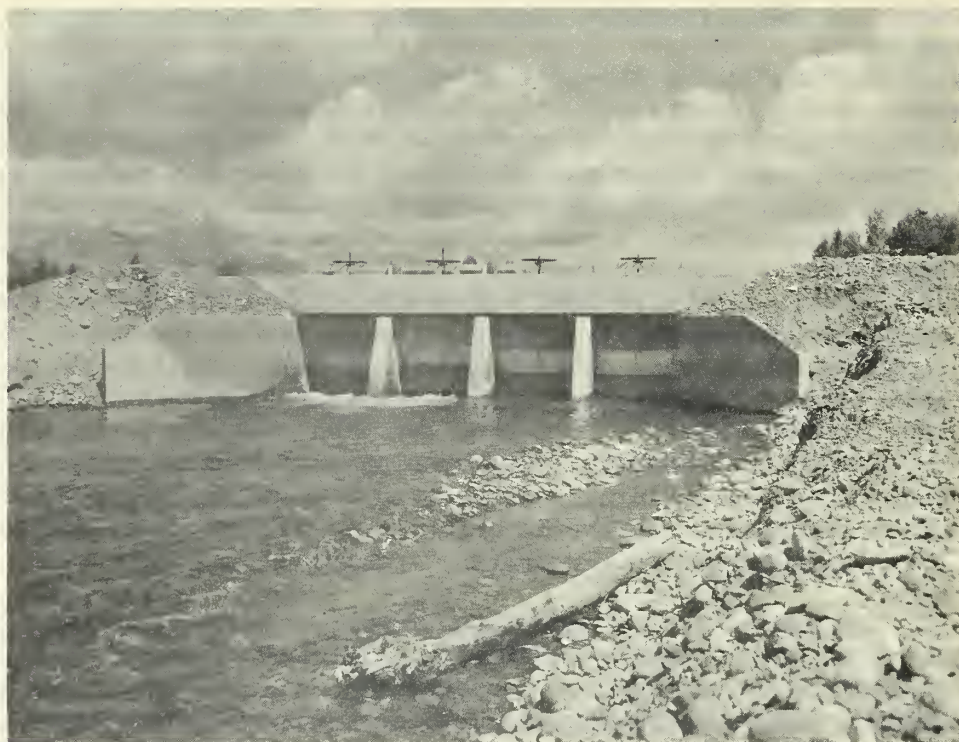
The drainage tile, concrete, fiber, or cement asbestos pipe shall not be less than 4 inches in diameter. Closed drains will be approved only when the technician has approved the detailed design features covering grade, tile or pipe capacity, joint treatment, blinding, outlets, and other design features pertinent to the site. All installations will be in accordance with plans and specifications approved by the responsible technician and must meet SCS technical standards for the State. A copy of such plans and specifications will be furnished to the producer prior to construction.

Maximum Federal Cost-share:

- a. 50% of the cost of materials and installation, or
- b. 50% of the cost of materials and installation, excluding backfilling costs, for drains laid and covered in open ditches where the cost was shared for such ditches under a previous program.

\*C-12. Reorganization of irrigation systems.--Cost-sharing may be authorized for reorganizing irrigation systems to conserve water and prevent erosion. This practice is applicable only to irrigation systems under which all lands benefited have valid water rights and for which an adequate supply of water is available. Irrigation systems eligible for participation under this practice are those owned and controlled by individual farmers, or owned and controlled by a group of farmers who control the irrigable lands under the system.

The reorganization must be carried out in accordance with a written plan approved by the responsible technician. A copy of such plan will be maintained in the files of the technician as a permanent record readily accessible to the producer and the county committee. The plan shall be accompanied by a map showing both the present and proposed irrigation



Adequate diversion structure provides for efficient water management.

systems. Practices to be performed during the program year under this practice shall be indicated and must contribute to an orderly accomplishment of the entire reorganization. Any related practices such as the construction or lining of irrigation reservoirs, leveling land, or installing or improving drainage systems which the operator intends to perform, should also be shown. If such related practices are necessary to make the reorganization effective, they should be required as a part of the plan.

The plan must indicate the manner in which water conservation or erosion control will be accomplished. If applicable, consideration should be given to (1) efficient conveyance and use of the water, (2) proper disposal of any waste, (3) any salinity or drainage problems, and (4) soil capabilities.

All installations will be in accordance with a plan approved by the responsible technician and must meet SCS technical standards for the State.

Cost-sharing may be authorized under this practice for construction and enlargement of ditches, installation of siphons, flumes, drops, chutes, weirs, division boxes, turnouts, diversion gates, permanently located pipe, and similar permanent structures necessary in the reorganization.



All lumber, except redwood, used in irrigation structures shall be treated by (1) commercial coal-tar creosote pressure treatment, (2) hot-and-cold bath creosote treatment, (3) pentachlorophenol commercial pressure treatment, (4) pentachlorophenol cold-soaking method, (5) osmose salt preservative treatment, or (6) osmoplastic preservative treatment. Creosote or pentachlorophenol applied with a brush, a spray, or any method other than prescribed for the standard methods above will not qualify. All lumber must be of 2-inch nominal dimension.

Where concrete blocks are used, cost-sharing will be limited to prefabricated concrete blocks having mineral rock as an aggregate. Construction stakes shall be set prior to construction and structures shall be located so as to fit into the overall irrigation plan for the entire farm. No Federal cost-sharing will be authorized for reorganizing an irrigation system if the primary purpose of the reorganization is to bring additional land under irrigation, or for reorganizing a system which was not in use during at least 2 of the last 5 years.

Cost-sharing will not be allowed under this practice unless all of the above-listed conditions have been met. Cost-sharing will not be authorized for repair or maintenance of existing structures, or for structures installed for crossings, or for other structures installed primarily for the convenience of the farm operator. No cost-sharing will be allowed under this practice for portable pipe.

Maximum Federal Cost-share:

50% of the cost of approved reorganization.

\*C-13. Leveling irrigable land.--Cost-sharing may be authorized for the leveling of irrigable land to predetermined elevations to prevent erosion or seepage and to permit control and uniform distribution of irrigation water. No cost-sharing will be allowed for restoration of grade by floating.

No Federal cost-sharing will be allowed for leveling if the primary purpose of the leveling is to bring into agricultural production land which was not devoted to the production of cultivated crops, crops normally seeded for hay or pasture in the area, or mountain meadow during at least 2 of the last 5 years. In granting prior approval for this practice, the county committee must be satisfied that (1) the project requires more than routine leveling operations and will require the movement of a considerable volume of earth to correct serious land irregularities, (2) the land is suitable for irrigation, and (3) an adequate supply of suitable water is available for irrigation of the land to be leveled.

Contour bench leveling.--To qualify for contour bench leveling, the area to be leveled must have an average natural field slope of 1% or more. The average final grade of the benches in the direction of irrigation shall be not greater than 0.3% with a cross slope essentially level. Direction of the benches shall be approximately at right angles to the average natural slope of the field.



All leveling must be carried out in accordance with a plan approved by the responsible technician and must meet SCS technical standards for the State. A field survey shall be made of the area to be leveled and necessary construction stakes shall be set showing cuts and fills. Stakes should remain in the field as originally established until final checking has been accomplished and the area of cuts and fills determined.

Only the acreage on which cut and fill occurs in the leveling operations shall be included in computing cost-sharing and applying the cost-share limitation.

Maximum Federal Cost-share:

50% of the cost of earthmoving in approved leveling operations.

\*C-14. Irrigation dams.--Cost-sharing may be authorized for constructing, enlarging, or lining dams, pits, or ponds for irrigation water. In addition to prior approval by the county committee, the construction and enlargement of dams impounding water for irrigation, regardless of size, must have prior approval of the SCS technician. No Federal cost-sharing will be authorized for constructing or lining dams, pits, or ponds if the primary purpose of the water impoundment is to bring into agricultural production land which was not devoted to the production of cultivated crops or crops normally seeded for hay or pasture in the area during at least 2 of the last 5 years, except where the water will be used for the establishment or improvement of permanent vegetative cover for soil protection. Cost-sharing will not be authorized for cleaning or otherwise maintaining existing structures. Each dam shall be constructed within the following minimum specifications and in accordance with special detailed specifications and designs which may be recommended by the technician in line with SCS technical standards for the State. The design and construction specifications prepared for all dams must be approved by the technician and the county committee and furnished to the cooperator prior to construction.

Plans and specifications for dams impounding water in excess of 20 feet in depth or storing more than 100 acre-feet, concrete dams, and rubble masonry dams, because of the elements of design involved, must receive special approval in accordance with established SCS procedures.

Top width of dams shall be a minimum of 8 feet and shall be determined on the basis of sound structural design without regard to the size or type of equipment used on construction. Slopes shall not be steeper than 3 to 1 on the upstream and 2 to 1 on the downstream slopes. Free-board shall be adequate to carry anticipated runoff and shall be adequately protected. Supplemental specifications will provide for a mechanical spillway whenever the rate or volume of runoff is such that a natural or excavated spillway will not function properly.

Sealing reservoirs.--Cost-sharing may be approved for lining leaky irrigation reservoirs with bentonite, or approved asphaltic base membrane lining for the purpose of conserving irrigation water. The lining must be

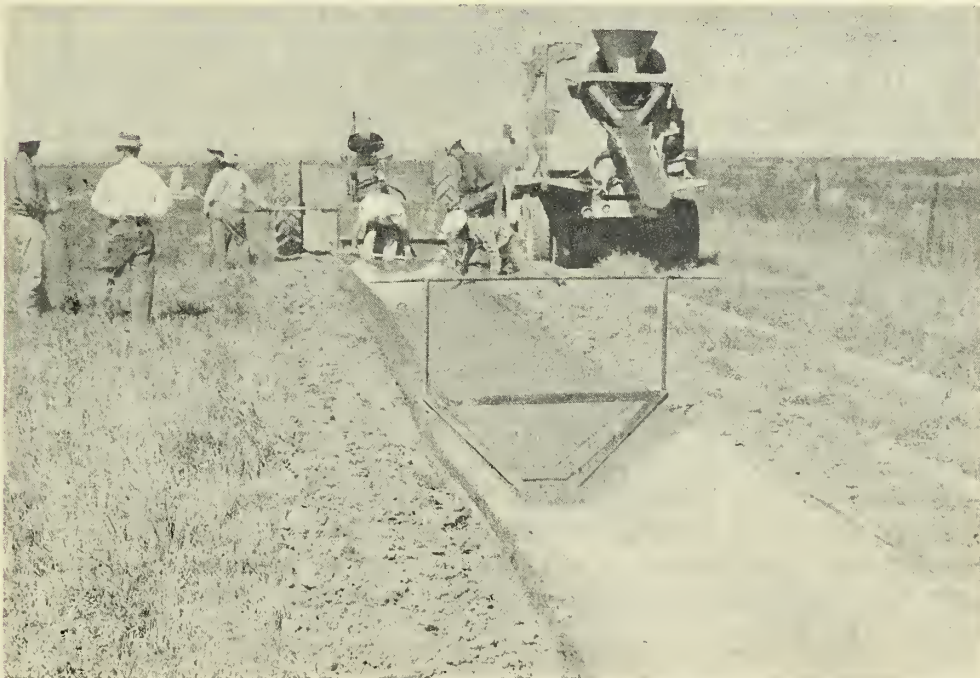
installed in accordance with plans and specifications which will be furnished to the producer by the technician prior to installation of the lining. In Laramie County, cost-sharing may be allowed for sealing earthen reservoirs with salt. Representative soils from the site to be lined shall be analyzed by a recognized soils laboratory and the treatment approved will be limited to that recommended by the laboratory.

Riprap.--Area of riprap, for purposes of computing cost-shares, shall include that surface of riprap exposed to the waterside of the dam or spillway channel, not to exceed the height of the dam protected, and any other areas subject to erosion and riprapped in accordance with recommendations of the technician.

Maximum Federal Cost-share:

- a. 50% of the cost of constructing the reservoir including foundation preparation, fill construction, spillway construction, site clearance, and construction of inlet and outlet facilities.
- b. 50% of the installed cost of approved riprap or other approved structures constructed to protect the water face of the dam from erosion.
- c. 50% of the installed cost of approved lining.

\*C-15. Lining irrigation ditches.--Cost-sharing may be authorized for lining properly located and constructed irrigation ditches which are



Water loss is reduced by lining ditches with concrete.



a part of an existing irrigation system, with bentonite, concrete, asphaltic base membrane, or butyl rubber, to prevent erosion and loss of water by seepage. Small water control structures, other than prefabricated structures necessary to permit the proper control and utilization of water in the ditch, shall be constructed at the time the lining is being installed. Structures eligible for cost-sharing under this practice shall be limited to those which, in the opinion of the SCS technician, are a contiguous part of the lining, can be easily formed while the ditch is being lined, and which do not require the construction of other than simple forms. Rates of cost-sharing for these structures shall be limited to the rates applicable to the lining being installed. No Federal cost-sharing will be allowed for lining irrigation ditches or for approved water control structures if the primary purpose is to bring additional land under irrigation, or for lining ditches in a system which was not in use during at least 2 of the last 5 years.

Irrigation structures, other than concrete ditch lining together with the contiguous control structures described above, which are approved by the county committee in a plan for reorganization of an irrigation system are not eligible for cost-sharing under this practice but may be eligible under practice C-12.

Concrete method.--Poured concrete lining shall have a minimum thickness of 3 inches, except that concrete placed with slip forms may have a minimum thickness of 2 inches if the overall cross sectional area of the lined ditch does not exceed 3.75 square feet. All concrete ditch lining shall be constructed in accordance with plans and specifications approved by the technician and a copy of same will be given to the producer prior to construction. The cross section shall be sufficient to carry the desired flow with a minimum freeboard of 4 inches. The concrete mix shall meet SCS standards. Expansion joints shall be spaced in accordance with SCS standards. Cost-sharing shall be limited to the "design quantity" of concrete, as determined by the SCS technician, or the "delivered quantity," whichever is smaller.

Full-round and half-round concrete and metal pipe.--Approved full-round and half-round concrete and metal pipe may be used to line sections of ditches where, because of location and topography, it is impracticable to use other materials. These materials will be approved under this practice only when their use represents the most feasible method of lining the ditch section and the installation is in strict compliance with the objectives and purposes of this practice. Concrete and metal pipe installed as an integral part of, or to supplement or supplant, water control structures approved under practice C-12 will not be eligible under this practice. Installations under this practice will be placed in accordance with plans approved by the responsible technician and must meet SCS technical standards for the State.

Rubble masonry lining.--Rubble masonry for ditch lining shall be constructed by first placing clean durable rock or stone in a bed of mortar.



Additional mortar shall be placed in voids between the rock or stone so that a relatively uniform surface results with a minimum projection of the rock or stone above the mortar. All construction under this practice shall be in accordance with plans and specifications approved by the technician.

Refined bentonite lining.--Bentonite lining may be used in accordance with any of the following methods of placement:

(a) Mixed blanket method.--Smooth or level the area to be treated, plow to a depth of 4 inches to 6 inches, and disk when dry. Spread refined bentonite uniformly over the area at the rate of from 3/4 to 1 pound per square foot. Work the bentonite into the soil with a disk layer until the original soil density is obtained. A protective coating of 2-3 inches of gravel or 4-6 inches of earth shall be applied when required.

(b) Pure blanket method.--Excavate the ditch bottom and slopes 6 inches below grade and compact the area to be treated. Apply bentonite at the same rate recommended under the mixed blanket method in a uniform layer. Cover the layer of bentonite with 6 inches of soil or gravel and pack to original density.

(c) Sedimenting methods.--The ditch section must first be cleaned, shaped, riprapped, or otherwise protected against erosion to the satisfaction of the responsible technician. The appropriate sealing method, or in special cases any successfully demonstrated compromise between the two methods which is acceptable to the technician, shall be used.

1. The dispersion method shall be used in sandy channels having a sufficiently flat grade for ponding and having bottom and sides suitable for harrowing so that the bentonite can be made to penetrate the soil rather than to form a temporary surface seal. The ditch section shall be effectively dammed by either waterproofing an existing check structure or constructing a temporary earth dam. The bentonite used shall have a grit content of 7% or less, and a colloidal yield of 70% or more. A mixing method acceptable to the technician shall be used to produce, at a desired mixing rate, a bentonite-water mixture averaging 1.0% colloidal bentonite by weight. Approximately 3/4 pound of dry bentonite per cubic foot of water is needed for this concentration. Colloidal mixture shall be ponded above the high waterline at the upper end of the pond and be kept ponded for at least 48 hours. After the maximum ponding depth is attained, the ditch sides and bottom shall be stirred by a harrow, disk, or similar implement. This shall be done at least twice each day for 2 days and in a manner producing a minimum of bank sloughing.

Known extreme high-loss-areas shall be blanketed with a tamped soil-bentonite mixture prior to ponding. Additional bentonite shall be added whenever an unexpected insufficiency occurs because of bentonite flocculation, or excessive loss of mixture during filling.

2. The multiple dam method shall be used in gravelly or rocky channels having a steep grade and ditch bottom and sides unsuitable for

harrow operation. The ditch section shall be divided by an adequate number and spacing of dams built of a mixture of granular high-swell bentonite (same requirements as above) and some supplemental bridging agent such as a local low-grade bentonite or wet sawdust. Composition of the mixed material shall be acceptable to the responsible technician. Water shall be released from the upstream end. As the first dam is overtopped, the material in the dam shall be broken up and mixed with the water as quickly as possible to obtain a lumpy mixture at maximum speed. In large canals a dragline or backhoe may be used to help break up the dam. The same process shall be repeated for the remaining dams. In cases where extremely rocky and open materials are encountered, additional quantities of the sedimenting mixture shall be spread or water jet sluiced on the ditchbank areas and wherever deemed necessary by the technician.

Pit-run bentonite lining.--Pit-run bentonite may be approved for cost-sharing on a limited experimental basis. Individual projects approved shall be under the direction of the Agricultural Extension Service engineer who will select materials, prescribe method, and supervise installation.

Asphalt membrane.--The ditch to be lined is first shaped to the proper cross section and rolled or packed sufficiently to eliminate surface irregularities. The asphalt rolls are then cut into strips of a length sufficient to reach across the surface of the ditch cross section. The strips which come prepared without paper on alternate edges, provide an automatic seal upon overlapping and are placed on the prepared earth surface with the nonpapered edges overlapping. The distance of overlap is to coincide with the width of the nonpapered edge of the membrane. After the asphalt has been properly placed, an earthen backfill cover should be placed upon it to minimize the possibilities of damage.

Butyl rubber lining.--The ditch to be lined with butyl rubber shall be shaped to a cross section which will, after the lining has been placed and buried with not less than a 6-inch cover, result in the required water carrying cross section. The base supporting the lining must be packed sufficiently to eliminate surface irregularities, clods, and stones. Butyl rubber sheets must be placed in such a manner that the upper edge extends a minimum distance of 6 inches above the maximum high waterline. Sheets will be spliced as recommended by the manufacturer. Minimum thickness of butyl rubber sheets shall be 1/32 inch. All installations under this practice will be in accordance with plans approved by the responsible technician and must meet SCS technical standards for the State.

Maximum Federal Cost-share:

50% of the installed cost of approved lining.

\*C-16. Spreader ditches, spreader dikes, and diversion structures. Cost-sharing will be allowed for the construction or enlargement of permanent ditches, dikes, and diversion structures for the diversion and spreading of floodwater, to prevent erosion, to permit beneficial use of runoff, or to replenish ground water supply. All construction under this practice





Spreader ditches permit beneficial use of runoff water.

shall be in accordance with plans and specifications approved by the technician and a copy of same shall be forwarded to the producer prior to construction. Limiting design factors are outlined as follows:

Principal diversion structure.--Where structures are necessary to divert flows into the spreading system, they will be required and constructed in accordance with plans approved by the SCS technician. Where an earthen dam is required for this purpose, it shall be designed in accordance with the general principles of earth storage dams. Diversion structures of concrete or rubble masonry must be constructed in accordance with specially approved plans and specifications for the site.

Control structures.--Where structures are necessary for the protection of outlets and water channels of the system, they will be required and constructed in accordance with plans approved by the SCS technician.

Ditches.--All ditches shall be constructed on a nonerosive grade. Spreader ditch systems designed to provide automatic distribution of flood water should be limited to sites having average slopes of not more than 3%. All discharge outlets, either at the end or along the length of the ditch where natural sod is not adequate to control erosion, shall be protected.

Dikes.--Dikes 8 feet or less in height shall have side slopes not steeper than 2 to 1 or flatter than 4 to 1.



Riprap.--Cost-sharing may be approved for riprap required to prevent erosion adjacent to approved structures. The technician will delineate areas requiring riprap protection and provide the producer with construction plans.

Maximum Federal Cost-share:

- a. 80% of the cost of foundation preparation, fill construction, and spillway construction.
- b. 80% of the cost of site clearance and the construction of inlet and outlet facilities.
- c. 80% of the installed cost of approved riprap or other approved structures constructed to protect approved areas from erosion.

C-17. Subsoiling to improve water penetration and retard runoff to control erosion.--Cost-sharing may be authorized for subsoiling cropland to permit better penetration of water and prevent erosion. Land must be subsoiled to a depth which effectively shatters the hardpan or plow sole. Spacing between subsoil furrows shall not be in excess of 4 feet and shall be done as a separate operation from any seedbed preparation. Applicable only to land which the county committee determines can be benefited by subsoiling.

Maximum Federal Cost-share:

- a. Subsoiling to a depth of not less than 18 inches--\$2.25 per acre.
- b. Subsoiling to a depth of less than 18 inches, but not less than 12 inches--\$1.50 per acre.
- c. Subsoiling to a depth of not less than 10 inches, with furrows not in excess of 3 feet apart horizontally--75 cents per acre.

CONSERVATION PRACTICES WITH BENEFITS OF LIMITED DURATION --  
generally requiring periodic repetition

D. Practices Primarily For Establishing Temporary Protective Vegetative Cover

D-1. Vegetative cover for winter protection.--Cost-sharing may be authorized for the establishment of a winter cover of wheat, rye, barley, oats, or Sudan grass to protect exposed land from wind or water erosion. A good stand and a good growth must be obtained in sufficient time to protect the area in the fall and winter of 1962 and 1963 and must be maintained on the land to a date specified in the county program. The acreage eligible for cost-sharing will be limited to the acreage designated by the producer and approved by the county committee prior to establishment. Minimum seeding rates and methods of seeding will be specified by the county

committee. Pasturing consistent with good management may be permitted, but none of the growth may be harvested for hay or seed, except that the State Committee may authorize the harvesting of the growth for hay or silage in areas where it determines that a serious shortage of hay or silage exists due to adverse weather conditions and the growth harvested is needed for use on farms in the area. Volunteer stands will not qualify for cost-sharing.

Maximum Federal Cost-share:

50% of the cost of eligible seed sown.

D-3. Biennial legumes and nonhardy alfalfa for green manure.--Cost-sharing may be authorized for the establishment of biennial legumes and nonhardy alfalfa for green manure. A good stand must be obtained and a good growth incorporated into the soil between the dates of September 1, 1963, and July 15, 1964. Pasturing consistent with good management may be permitted, but none of the growth may be harvested for hay or seed, except that the State Committee may authorize the harvesting of the growth for hay or silage in areas where it determines that a serious shortage of hay or silage exists due to adverse weather conditions and the growth harvested is needed for use on farms in the area. Volunteer stands will not qualify.

Eligible seeds and seeding rates.--Seeds eligible for cost-sharing under this practice are sweetclover, nonhardy alfalfa, and red clover. The minimum seeding rate is 10 pounds per acre for irrigated land and 5 pounds per acre for dry land.

Maximum Federal Cost-share:

50% of the cost of eligible seed, including inoculation costs.

E. Practices Primarily for the Temporary Protection of Soil from Wind and Water Erosion

E-2. Establishment of contour farming operations on nonterraced land.--Cost-sharing may be authorized for the establishment of contour farming operations on nonterraced land to protect soil from wind or water erosion. All cultural operations must be performed as nearly as practicable on the contour. The crop stubble or crop residue must be left standing over winter, or a winter cover crop established, or necessary protective tillage operations carried out, on acreage devoted to row crops. This practice is not applicable on any acreage for which cost-sharing is approved under practice A-5.

Maximum Federal Cost-share:

\$1 per acre.

E-3. Wind erosion control operations.--To protect farmland from wind erosion, cost-sharing may be authorized for performance of



approved tillage operations at right angles to prevailing winds. Cultural or tillage measures which are a part of normal farming operations will not qualify for cost-sharing. Approved cultivation operations shall be carried out whenever necessary to adequately prevent an erosion hazard and any acreage on which cultivation operations did not adequately control erosion throughout the erosion hazard period will not qualify.

Recommended equipment, tillage depth, and maximum spacing of furrows are set forth below for heavy, medium, and light soils:

	<u>Heavy soils</u>	<u>Medium tex- tured soils</u>	<u>Light sandy soils</u>
Equipment -	Narrow chisels	Duckfoot or wide chisels	Listers
Depth -	4" - 9"	4" - 9"	6" - 9"
Maximum spacing of fur- rows (center to center)	30"	30"	36"

Maximum Federal Cost-share:

50 cents per acre of farmland adequately protected throughout the erosion hazard period.

CONSERVATION PRACTICES WITH LIMITED AREA APPLICABILITY

F. Practices To Meet Special County Conservation Needs

F-1. Special conservation practices.--Consistent with the principles set forth in section 1, the county committee and designated representatives of the Soil Conservation Service and the Forest Service at the county level may recommend, and the State Committee and designated representatives of the Soil Conservation Service and the Forest Service at the State level may approve, for use in a county, practices included in the National Bulletin for which there is need locally on a substantial number of farms but which are not selected for use in the State. Such approval shall be subject to review by the Deputy Administrator, Conservation, ASCS, as to compliance with the provisions of the National Bulletin.

Maximum Federal Cost-share:

The percentage of the average cost of carrying out the practice as determined under the provisions of section 3-H.

F-2. County conservation practices.--Consistent with the principles set forth in section 1, the Deputy Administrator, Conservation, ASCS, may approve for use in a county, practices which are not included in the National Bulletin which are needed to meet particular conservation problems

in the county. Such approval may be given only upon the recommendation of the State and county committees and designated representatives of the Soil Conservation Service and the Forest Service at both the county and State levels, and upon their finding (1) that the conservation problem exists on a substantial number of farms in the county, (2) that the practices contained in the National Bulletin will not provide adequate treatment of the problem, (3) that the proposed practice will adequately meet the problem, (4) that the proposed practice would not be performed without Federal cost-sharing, (5) that the proposed practice will provide the most enduring solution to the problem practicably attainable under existing circumstances, (6) that the proposed practice is one on which the offering of financial assistance is fully justified as being in the public interest, and (7) that the proposed practice meets the standards and requirements of comparable practices in the National Bulletin.

Maximum Federal Cost-share:

The percentage of the average cost of carrying out the practice as determined under the provisions of section 3-H.

F-3. Practices to meet new conservation problems.--Consistent with the principles set forth in section 1, the Deputy Administrator, Conservation, ASCS, may approve for use in a county, practices for the treatment of critical conservation problems, primarily those which have arisen subsequent to the initiation of the program in the county. Such approval may be given only upon the recommendation of the State and county committees and designated representatives of the Soil Conservation Service and the Forest Service at both the county and State levels, and upon their finding (1) that the conservation problem exists on a substantial number of farms in the county, (2) that the practices contained in the National Bulletin will not provide adequate treatment of the problem, (3) that the proposed practice will adequately meet the problem, (4) that the proposed practice would not be performed to the desired extent without Federal cost-sharing, (5) that the offering of Federal cost-sharing for the proposed practice is justified as within the scope of national conservation objectives, (6) that adequate facilities, including technical services, will be available to permit the practice to be carried out effectively, and (7) that treatment of the problem cannot be safely delayed until a subsequent program.

Maximum Federal Cost-share:

The percentage of the average cost of carrying out the practice as determined under the provisions of section 3-H.

F-4. Emergency conservation measures to restore to productive use land damaged by natural disasters.--This practice is applicable only in counties designated by the Secretary as counties in which wind erosion, floods, hurricanes, or other natural disasters have created new conservation problems which (1) if not treated will impair or endanger the land, (2) materially affect the productive capacity of the land, (3) represent



damage which is unusual in character and, except for wind erosion, is not of the type which would recur frequently in the same area, and (4) will be so costly to rehabilitate that Federal assistance is required to return the land to productive agricultural use.

Emergency conservation practices may be approved by the Deputy Administrator, Conservation, ASCS, upon recommendation by the State and county committees and designated representatives of the Soil Conservation Service and Forest Service at both the State and county levels. Eligible measures shall be specified in the wording of the practice as approved for use in the county. Cost-sharing may be offered under this practice only for replacing a practice or restoring the land to its normal productive capacity and may not be offered for the solution of conservation problems existing prior to the disaster involved.

The cost-share computed for any person for this practice shall not be increased in accordance with section 6-D, and shall not be included with the cost-shares computed for such person for other practices in applying the maximum Federal cost-share limitation in section 6-E. The total of all Federal cost-shares for this practice to any person with respect to farms and ranches in any one county shall not exceed the sum of \$2,500, except that, with the written prior approval of the State committee, a higher maximum may be approved in individual cases upon justification by the farmer or rancher on the basis of exceptional need and his inability to otherwise carry out the work.

Costs for this practice will be shared only for eligible measures carried out during the period July 1, 1962, to December 31, 1963, inclusive, and only if cost-sharing is requested by the farm or ranch operator within 30 days after the practice is approved for use in the county or before the date on which performance of the eligible measure is started, whichever is the later. With the approval of the county committee, costs of performing this practice may be shared with farmers or ranchers who carry out eligible measures on their lands or, with the permission of the owners or operators of adjacent or nearby lands, on such adjacent or nearby lands.

Maximum Federal Cost-share:

The percentage of the average cost of carrying out the practice as determined under the provisions of section 3-H.

CONSERVATION PRACTICES WITH BENEFITS PRIMARILY TO WILDLIFE

G. Wildlife conservation practices with soil and water conservation benefits.--Consistent with the principles set forth in section 1, the Deputy Administrator, Conservation, ASCS, may approve wildlife conservation practices for inclusion in county programs upon the recommendation of the State and county committees and designated representatives of the Soil Conservation Service and the Forest Service at both the county

and State levels. Such practices may include the restoration or development of marshlands and cropland into wetland areas on farmlands for wildlife, the construction on farmland of water facilities for wildlife habitat or protection, the establishment of vegetative cover on farmland to provide habitat, food, or shelter for wildlife, and other wildlife practices with substantial soil and water conservation values as well as wildlife benefits to the farmlands of the persons who carry them out. Wildlife practices shall be subject to the same conditions as other practices in the program, shall meet the standards and requirements of comparable practices in the National Bulletin, and shall specify the eligible measures on which Federal cost-sharing may be approved. Proposed practices shall be developed in consultation with the State agency having responsibility for wildlife conservation.

Maximum Federal Cost-share:

The percentage of the average cost of carrying out the practice as determined under the provisions of section 3-H.









